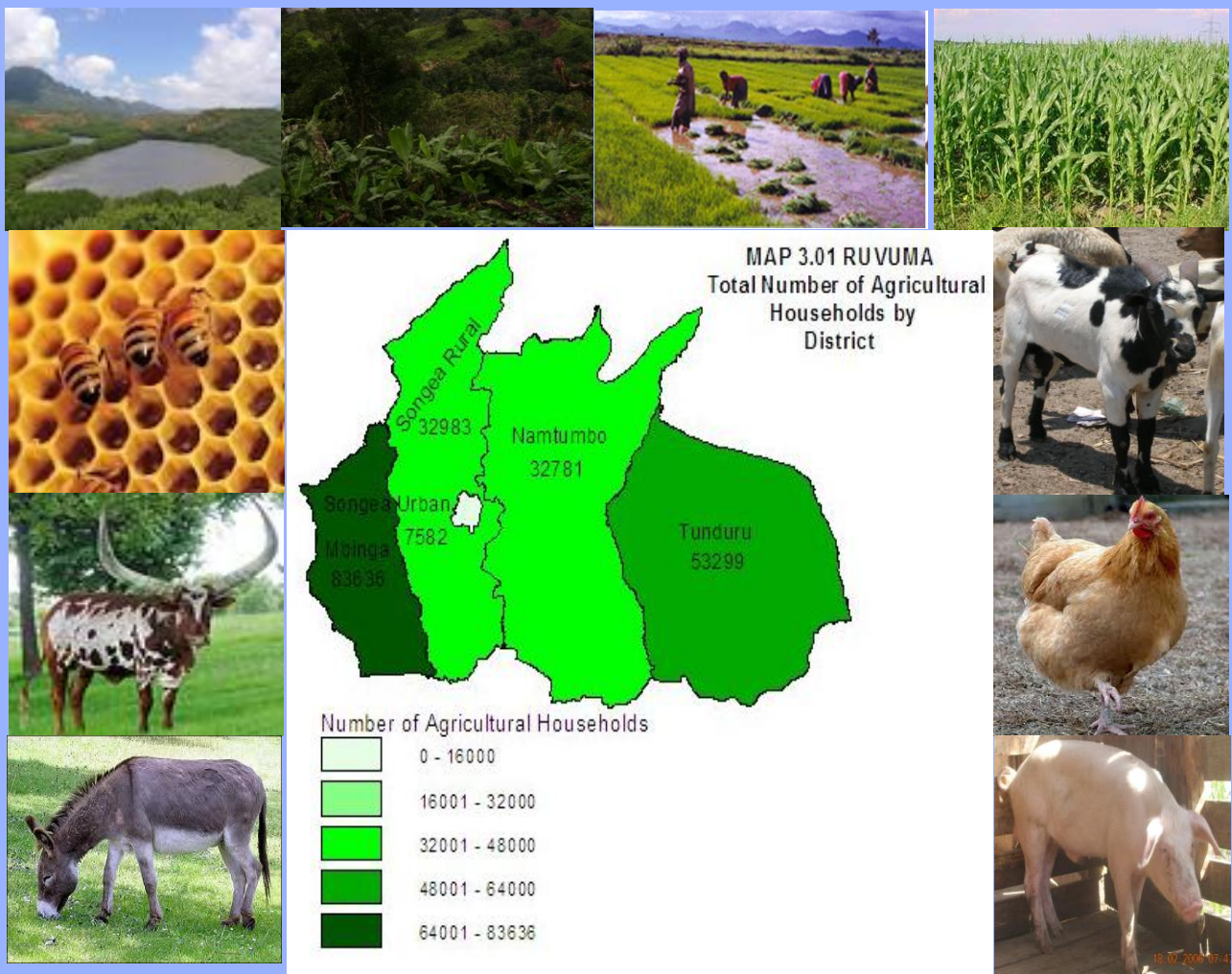




The United Republic of Tanzania

NATIONAL SAMPLE CENSUS OF AGRICULTURE 2007/2008

Volume Vj: REGIONAL REPORT: **RUVUMA REGION**



Ministry of Agriculture, Food Security and Cooperatives; Ministry of Livestock Development and Fisheries; Ministry of Water and Irrigation; Ministry of Agriculture, Livestock and Natural Resource, Zanzibar; Prime Minister's Office, Regional Administration and Local Governments; Ministry of Industry, Trade and Marketing; The National Bureau of Statistics and the Office of the Chief Government Statistician, Zanzibar

SEPTEMBER , 2012



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ACRONYMS

ASDP	Agricultural Sector Development Project
CSPRO	Census and Survey Processing Program
DFID	Department For International Development
DIAS	District Integrated Agricultural Survey
DS	District Supervisor
EAS	Expanded Agricultural Survey
EAs	Enumeration Areas
EU	European Union
FE	Field Enumerator
GDP	Gross Domestic Product
Ha	Hectares
HH	Household
IAS	Integrated Agricultural Survey
ICR	Intelligent Character Recognition
IEC	Information, Education and Communication
JICA	Japanese International Cooperation Agency
LRS	Long Rainy Season
MAFS	Ministry of Agriculture and Food Security
MCM	Ministry of Co-operatives and Marketing
MWLD	Ministry of Water and Livestock Development
NBS	National Bureau of Statistics
NGO	Non Governmental Organization
NMS	National Master Sample
NSCA	National Sample Census of Agriculture
NSGRP	National Strategy for Growth and Reduction of Poverty
PORALG	President's Office, Regional Administration and Local Government
PPS	Probability Proportional to Size
PSU	Primary Sampling Unit
RAAS	Rapid Appraisal Agricultural Survey
RS	Regional Supervisor
SPSS	Statistical Package for Social Science
TOT	Training of Trainers
UNDP	United Nations Development Programme
UNFAO	United Nations Food and Agriculture Organization
VPO	Vice President's Office

PREFACE

At the end of the 2007/08 Agricultural Year, the National Bureau of Statistics (NBS) in collaboration with the Ministries of Agriculture, Food Security and Cooperatives, Livestock and Fisheries Development; Water; Industry and Trade; the Prime Minister's Office, Regional Administration and Local Government (PMO/RALG) and the Office of the Chief Government Statistician, (OCGS), Ministries of Agriculture and Natural Resources; Livestock and Fisheries conducted the Agricultural Sample Census. This is the fourth Agricultural Census to be carried out in Tanzania, the first one was conducted in 1971/72, the second in 1993/94 and 1994/95 (during 1993/94 data on household characteristics and livestock count were collected and data on crop area and production in 1994/95), and the third was conducted in 2002/03.

The census collected detailed data on crop production, crop marketing, crop storage, livestock production, fish farming, and poverty indicators. In addition to this, the census was large in its scope and coverage as it provides data that can be disaggregated at district level and thus, allow comparisons with the 2002/03 National Sample Census of Agriculture. The census covered smallholders in rural areas only and large scale farms. This report presents data disaggregated at regional and district level and it focuses on smallholders crop production and livestock keeping.

The extensive nature of the census in relation to its scope and coverage is a result of the increasing demand for more detailed information to assist in the proper planning of the agricultural sector and in the administrative decentralization of planning to district level. It is hoped that this report will provide new insights for planners, policy makers, researchers and others involved in the agricultural sector in order to improve the prevailing conditions faced by agricultural households in the country.

On behalf of the Government of Tanzania, I wish to express my appreciation for the financial support provided by the development partners, in particular, the Department for International Development (DFID) and the Japanese Government through the Japan International Cooperation Agency (JICA) and others who contributed through the pooled fund mechanism.

My appreciation also goes to all those who in one-way or the other have contributed to the success of the census. In particular, I would also like to mention the enormous effort made by the Planning Group composed of professionals from the Agriculture Statistics Department of the National Bureau of Statistics, Ministry of Agriculture, Food Security and Cooperatives, Ministry of Livestock Development and Fisheries, Ministry of Water and Irrigation, Ministry of Agriculture,

Livestock and Natural Resource, Zanzibar, the Prime Minister's Office, Regional Administration and Local Government, Ministry of Industries, Trade and Marketing and the Office of the Chief Government Statistician, Zanzibar, the Food and Agriculture Organization of the United Nations and the Censuses and Surveys Technical Working Group (CSTWG).

Finally, I would like to extend my sincere gratitude to all the professionals, the consultants, Regional and District Supervisors and field enumerators for their commendable work. Certainly without their dedication, the census would not have been successful.

Dr. Albina A. Chuwa

Director General

National Bureau of Statistics

EXECUTIVE SUMMARY

The executive summary highlights the main survey results obtained during the National Sample Census of Agriculture 2007/08. This report covers small-scale agriculture households in Ruvuma region who were selected using statistical sampling techniques. The results in the report do not cover large-scale farmers. The highlights describe the important findings on agricultural production, productivity, livestock husbandry, access to resources; levels of involvement in agricultural related activities and poverty in Ruvuma region included are activities' indicators for one to get an overview, at regional level, of the rural agricultural households and their levels of involvement in agricultural and related activities.

i) Household Characteristics

The number of agricultural households in Ruvuma region was 210,281 out of which 147,596 (70%) were involved in growing crops only, 59 (0.1%) rearing livestock only and 62,626 (30%) were involved in crop production as well as livestock keeping. Most of the agricultural households were involved in annual crop farming and livestock as activity that provides most of their cash income.

The region has a literacy rate of 79.3 percent. The highest literacy rate is in Songea Urban (87.3%) and the lowest was Tunduru (66.5%). The literacy rate for the heads of households in the region was 85%, where 88 percent was for males and 70 percent for females. Fifty percent of the population aged 5 years and above in agricultural households in the region had completed different levels of education and 35 percent were still attending school. Those who had never attended school were 15 percent. Agricultural households in Mbinga, Songea Urban and Songea Rural district had the highest percentage (53% of population aged 5 years and above who had completed various levels of education).

ii) Crop Production**Land Area**

The total area of land available to smallholders was 773,178 ha. The regional average land area utilised for agricultural production per agricultural growing household was only 2 ha. Highest percent utilization of agricultural land was found in Tunduru (82%) and was lowest in Songea Rural (50%).

Planted Area

The area of land under temporary mono crops was 238,811 hectares (30.5% of the total land available to smallholders in Ruvuma), followed by fallow (146,436, 18.7%), permanent mono crops (86,718 ha, 11.1%), natural bush (83,841 ha, 10.7%), temporary mixed crops (64,836 ha, 8.3%), permanent/annual mixed crops (58,819 ha, 7.5%) and uncultivated land (48,847 ha, 6.2%).

The planted area occupied by cereals was 209,994 ha (60% of the total area planted with annuals). This was followed by roots and tubers (61,946 ha, 17%), Pulses (44,437 ha, 12%), Oil seeds and nuts (33,695 ha, 9%), Fruits and Vegetables and cash crops (1% each).

iii) Cereals

Maize

The number of households growing maize in Ruvuma region during the short and long rain season was 190,175 (90.5% of the crop growing households in the region). The total production of maize was 236,602 tonnes from an area of 149,316 ha yielding two tonnes per hectare on average. Mbinga district had the largest area under maize (54,973 ha) followed by Tunduru (32,248 ha), Songea Rural (29,283 ha) and Songea Urban (4,779 ha). The trend shows that between 2003 and 2008 total area under maize increased from 139,505 ha to 149,316 ha and yield per ha increased from 1.3 t/ha to 2 t/ha.

Paddy

Paddy was the second most important cereal crop produced in Ruvuma region. It was grown by 83,246 households representing 39.6 percent of agricultural households. The production of paddy was 55,675 tonnes from a planted area of 48,489 ha and the average yield was 1.1 t/ha. Tunduru had the largest area planted with paddy (28,691 ha), followed by Namtumbo (7,676 ha), Mbinga (6,317 ha), Songea Rural (5,116 ha) and Songea Urban (689 ha). Between 2003 and 2008 paddy production increased by 40 percent from 40,000 tonnes to 55,675 tonnes, whilst area under paddy increased from 38,178 to 48,489 ha. However, production per ha remained constant at about 1.1 t/ha.

Other cereals

Other cereals were produced in small quantities and a total of 12,188 tonnes were produced in 2008 agricultural year. The largest area under wheat was in Mbinga district.

iv) Roots and Tubers

The total production of roots and tubers was 108,594 tonnes. Cassava production occupied the largest area planted with roots and tubers (91.8%) of total land under roots and tubers 61,946 hectares, with production of 100,116 tonnes, followed by sweet potatoes (6.4%), Coco yam's (0.8%) Irish potatoes (0.6%) and the least is yams with 0.4% of the land.

Sweet potatoes

About 8.8 percent of household in Ruvuma grew sweet potatoes with an estimated area of 3,990 ha resulting in a total production of 7,488 tonnes. Mbinga district had the largest planted area with sweet potatoes (2,310 ha, 58% of sweet potatoes planted area in the region) followed by Songea Urban and Songea Rural (12% each), Tunduru (10%) and Namtumbo (8%). Highest yield was recorded in Songea Urban district with 3.3 t/ha and the lowest yield was in Tunduru and Namtumbo (1.1 t/ha each).

v) Pulses

A total area planted with pulses was 44,437 ha out of which 38,424 hectares was planted with beans (86.4% of the total area planted with pulses) followed by cowpeas (8.2%), bambaranuts (4.2%), field peas (0.6%) and green gram and mung bean each with 0.3 percent.

vi) Oil seed crop

Simsim and groundnuts were the most important oil seed crops grown in Ruvuma region. The total production of oilseed crops was 19,366 tonnes planted from an area of 33,591 hectares. Simsim had the largest area planted (11,718 ha, 35% of area under oil and nuts) followed by groundnuts (33%), soybean (19%) and sunflower (13%). However, the yield of groundnuts, soybeans and sunflower was higher than that of simsim. Forty percent of the groundnuts were grown in Tunduru, 29 percent in Namtumbo and 20 percent in Songea Rural. The remaining Mbinga and Songea Urban had an area of less than 20 percent. Namtumbo had the highest percentage of area planted with simsim (45% of total area with simsim), followed by Mbinga (23.5%), Songea Rural (16.2%) and Tunduru (14.5).

vii) Fruit and Vegetables

The total production of fruits and vegetables was 20,525 tonnes. The most cultivated fruit and vegetable crop was tomatoes with a planted area of 1,111 ha followed by spinach (849 ha) and onion (650 ha). The production of the other fruit and vegetables crops was relative small. Mbinga

district had the largest area planted with tomatoes (48% of total area under fruits and vegetables). Others were Songea rural (20%), Tunduru (16%), Songea urban (11%) and Namtumbo (5%). More cabbages were also produced in Mbinga than in any other district.

viii) Permanent Crops

The most important permanent crops in Ruvuma region were Cashewnut, cowpeas, coffee and banana. Cashewnuts had a planted area of 74,368 ha (41% of the planted area of all permanent crops). This was followed by pigeon peas (32,941 ha, 18.3%), coffee (30,679 ha, 17%), and banana (7,282 ha, 4%). Other crops were grown in small area and the bigger area had a mix of other crops.

- **Cashewnuts**

The total production of Cashewnuts was 7,749 tonnes and was grown by 37,626 household (17.9% of crop growing households). The average planted area was 1.98 ha and the average yield was 145 kg per ha. Tunduru had the largest area planted with Cashewnuts (96.3% of cashewnut planted area). The trend shows that cashewnut production had declined by 16 percent from 9,278 tonnes in 2003 to 7,749 tonnes in 2008.

- **Coffee**

The production of coffee doubled from 12,388 tonnes in 2003 to 22,640 tonnes in 2008. It was the second most important permanent crop in terms of area planted and 17% of the agricultural household grew the crop. However, the average planted area per household was small (0.83 ha) and the yield was 1.2 t/ha. Coffee was grown mainly in Mbinga, Songea Rural and Songea Urban. However, 99 percent of the area with coffee in the region was occupied by Mbinga district.

- **Pigeon peas**

The average area planted with pigeon peas per household was around 1.4 ha and the yield was about 60 kg/ha. Only six percent of the household grew the crops and in 2007/08 agricultural year the production was 2,098 tonnes. Tunduru district had the largest planted area with pigeon peas (96%).

- **Banana**

Mbinga district had the largest area planted with banana (4,461 ha) and the crop was grown by 38,692 households on 8,119 ha. On average 0.21 ha was planted per banana growing household.

ix) Agricultural inputs**• Improved Seeds**

The area planted using improved seeds was estimated to be 19,427 ha which represented 6 percent of the total area planted with annual crops and vegetables.

• Use of Fertilizers

The use of fertilisers on annual crops was moderate with a planted area of 92,130 ha (30.6% of the total planted area with annual crops in the region). About 83,182 ha (90.3%) were planted with inorganic fertilisers and 8,948 (9%) with organic fertilisers. Namtumbo district had the highest (29.7%) percentage area planted with fertilisers (all types), followed by Songea Rural (27.5%), Mbinga (21.1%), Tunduru (15.5%) and Songea Urban 6.2%). Organic fertiliser is mostly used in Mbinga district (46% of total area planted with organic fertilisers).

• Pesticides Use

The planted area applied with agrochemicals (pesticides) was estimated at 20,646 ha. Insecticides are the most common agrochemical used in the region (77% of total area applied with pesticides). This was followed by fungicides (14%), and herbicides (9%). Mbinga district had the largest planted area applied with fungicides (1.3% of the total area planted with annual crops), followed by Songea Rural and Songea Urban (1.1% each). Insecticides was mostly applied in Songea Urban (13.1% of the area under annual crops) compared to other district. While, Tunduru district had the highest percentage use of herbicides (0.9% of the planted area with annual crops).

x) Irrigation

In Ruvuma region, the area of annual crops under irrigation was 9,541 ha representing 3 percent of the total area planted with annual crops. Namtumbo had the largest area under irrigation (35.5% of the total annual crops area under irrigation) while Songea Rural and Tunduru were the least in terms of area under irrigation (14.8% each). The main sources of irrigation were rivers (74%). The other sources were tap water (17%), canals (7%) lake and dams (1%). Hand bucket was the main method of obtaining water for irrigation (51% of households practising irrigation) followed by gravity (47%).

xi) Agricultural Credit

The major agricultural credit provider in Ruvuma region were cooperatives (40%), followed by NGOs and development projects (16%), saving and credit society and family friends and relatives each with 10 percent, traders/stores (9%) private individuals and banks (7% each). Few agricultural households (7,172, 3.4%) accessed credits. Out of which 4,999 (70%) credits were accessed by male household members and 2,173 (30%) credits accessed by household members. In all districts both male and female household members accessed agricultural credit.

xii) Crop Extension Services

On average 118,320 households (56.3% of the total agricultural households in the region) received extension advises on crop production. The main source of extension advises was the government. More households in Songea Urban received extension advice (82%) than in other districts and the least was Mbinga (49% expressed as percent of total agricultural households). In terms of type of advice, more advices were given on crop spacing, followed by use of fertilisers, use of improved seeds and use of agrochemicals. Fewer households received advice of mechanisation and vermin control.

xiii) Soil Erosion and Water Harvesting Facilities

The number of agricultural households that had soil erosion problem on their farming land was 18,636 households (8.9% of the total agricultural households in the region). However, the number of households having soil erosion control/ water harvesting facilities on their farming land was only 10,706 which represent 5.1 percent of the total agricultural households in the region

xiv) Livestock and Poultry Production

Almost all types of livestock in Ruvuma region were increasing during the period from 1999 to 2008 except for sheep which showed a declining trend. Cattle increased from 75,000 in 1995 to 121,000 in 2003, before declining to 75,000 in 2008. Pigs increased from 89,600 to 183,000 as well as chicken from 1,100,000 to 1,700,000. Sheep decreased from 42,000 to 21,000 during the eight year period.

Cattle

The total number of cattle in the region was 75,366. The number of indigenous cattle was 61,768, 12,177 cattle were improved dairy breeds and 1,420 were improved beef cattle. The census results show that 25,755 households kept cattle which was equivalent to an average of 3 heads of cattle per

cattle-keeping-household. The district with the largest number of cattle was Mbinga which had about 41,921 cattle. This was followed by Songea Rural with 17,509 cattle and Namtumbo district 6,993 cattle. The contribution of other districts were less than 20%,

Goats

The number of goat rearing households in Ruvuma region was 78,037 (37% of all agricultural households in the region) with a total of 344,738 goats giving an average of 5 head of goats per goat-rearing-household. Mbinga had the largest number of goats (179,870 goats, 52%), followed by Songea Rural (21%), Namtumbo (16%), Tunduru (8%) and Songea Urban (3%). The number of goats has increased slightly from 309,595 in 2003 to 344,738 in 2008 representing an annual growth rate of 2.2%.

Sheep

The number of sheep-rearing households was 5,703 (2.7% of all agricultural households in Ruvuma region) rearing 20,535 sheep, giving an average of 4 heads of sheep per sheep rearing household. The district with the largest number of sheep was Mbinga (10,532 sheep), followed by Namtumbo (4,458 sheep), Tunduru (3,158 sheep), Songea Rural (1,792 sheep) and Songea Urban (595 sheep). There was a declining trend of the number of sheep from 24,458 in 2003 to 20,535 in 2008.

Pigs

The number of pig-rearing agricultural households in Ruvuma region was 64,624 (30.7% of the total agricultural households in the region) rearing 183,276 pigs. This gives an average of 3 pigs per pig-rearing household. The district with the largest number of pigs was Mbinga with 138,568 pigs (76% of the total pig population in the region) followed by Songea Rural (29,807 pigs, 16%).

Chicken

The number of households keeping chicken was 149,313 raising about 1,701,242 chickens. This gives an average of 11 chickens per chicken-rearing household. In terms of total number of chickens in the country, Ruvuma region ranked eleventh out of the 21 Mainland regions. The District with largest number of chickens was Mbinga (715,763 chicken), followed by Songea Rural (364,356 chicken), Tunduru (335,059 chicken), Namtumbo (208,313 chicken) and Songea Urban (77,751 chickens). The number of chicken increased between 2003 and 2008 from 1,555,617 to 1,701,242 chickens.

Fish Farming

The number of households involved in fish farming in Ruvuma region was 4,018. Fish were raised mainly in dug out ponds (95%) and the main fish specie planted was Tilapia. Mbinga district had the highest number of household practicing fish farming (2,478 households, 62%).

Livestock disease and pests

The results indicate that 16.6 percent and 7.1 percent of the total livestock-keeping households reported to have encountered ticks and tsetse fly problems respectively. There was a predominance of tick related diseases over tsetse related diseases. The percentage of households encountering tick problem was highest in Mbinga followed by Songea Urban and Songea Rural while the percentage were relatively lower in Namtumbo and Tunduru districts. As for tsetse fly, the highest percentage of households reporting the problem was higher in Songea Rural and lowest in Namtumbo.

The most practiced method of tick controlling was spraying. Other methods used were dipping, smearing and other traditional methods like hand picking. However, 82 percent of livestock-keeping households did not use any method. The most common method used to control tsetse flies was spraying. This was followed by trapping and dipping.

Newcastle Disease

The disease affected 101,803 livestock keeping households. The districts found with highest percentage of households encountering disease were Tunduru (70.2% of the household in the district), followed by Mbinga (64.3%), Namtumbo (62.5%) and Songea Urban (60.4%).

The affected households were noted to use vaccination (46,427 household), and local herbs used by 39,871 household. Households found not using any control methods were 78,129 (48%).

Fowl Typhoid

There were 38,152 livestock rearing household reporting cases of Fowl typhoid in Ruvuma. The highest percentage of households reporting incidences of the disease were in Tunduru 39.5% of all household in the district, followed by Mbinga (23.4%), Songea urban (15.6%) and Songea Rural (15%), and lowest percentage was in Namtumbo (13.8%). Control of Fowl typhoid was mainly through prophylactic treatments and use of local herbs. About 80 percent of the households did nothing to control the disease.

Foot and mouth disease

The disease infected 1,482 livestock keeping households in the region. The district with the highest number was Namtumbo 699, followed by Songea Rural 326 households, Mbinga 207 household, Tunduru 132 hh and Songea Urban 119 hh.

Deworming

The percentage of households that dewormed their livestock was 50. More households dewormed pigs (41%) followed by household deworming goats/sheep (24%), chicken (21%) and cattle (14%). More household dewormed cattle in Songea Urban, and deworming was moderate in other district.

Use of Draft Power

Only one percent of the total agricultural households in the region reported using cattle (cows) for agricultural purposes, followed by uncastrated bulls 0.6%, castrated bulls 0.5%.

Access to Livestock Extension Services

The total number of households that received livestock advice was 70,129. The main livestock extension agent was the government (71%), followed by neighbours (11%), Radio/TV or newspaper (10%), NGOs/development projects (7%). Disease control was the highest ranking extension advice given to households. It was followed by proper animal housing, proper feeding and group formation.

xv) Poverty Indicators**Access to water**

About 72 percent of the households obtained water from a distance less than 300 meters during the wet season compared to 64 percent during the dry season. The most common distance from the source of drinking water was between 100 and 300 meters in both seasons. Fewer household got their water from a distance more than 2 km in both seasons. The main source of drinking water for agricultural households in Ruvuma region was piped water followed by unprotected wells, protected wells, unprotected spring, surface water (river, dams and streams) and protected covered spring.

Availability of Toilets

In Ruvuma, a large number of rural agricultural households use traditional pit latrines (195,368 households, 93%). 20,148 had improved pit latrine and 2,069 use flush toilets. However, 903

households had no toilet facilities distributed as follows: 29% were found in Namtumbo and in Tunduru district, 23% in Mbinga, and 10% in Songea Urban. Songea Rural had fewer households without toilet facilities.

Floor, Wall and Roofing Materials

82% of the households had houses with mud/sand floors followed by cement 14%. Whilst most of the houses had burnt bricks (73%) followed by sun-dried bricks and poles/mud 8%.

The most common roofing material was grass/leaves accounting for 53% of the total number of agricultural households in the region followed by iron sheets 42%. Least common materials were concrete, tiles, asbestos and grass& mud. Tunduru district had the largest number of households (39,744) using leaves or grass for roofing and the smallest number was recorded in Songea urban district.

Households Assets

Radios were owned by 64% of the total households in the region followed by bicycles 41%, iron 27%, mobile phones 19% and wheelbarrow 5%. Mbinga district was leading the other districts in the Number of households owning the four popular assets of radio, bicycle, iron and mobile phone.

Sources of Lighting Energy

Large number of households used wick lamp (50%) followed by hurricane lamp (43%), pressure lamp 4%, fire wood, electricity and solar each with less than 2% of the total agricultural households in the region. Mbinga had the smallest percent (40%) of households using wick lamp as the source of lighting energy and Tunduru district had the largest percent (70%). Mbinga was leading with 55% and Tunduru had the smallest number (20%) of the households using hurricane lamp as source of lighting energy.

Sources of Energy for Cooking

95.8 % of the total number of households in the region used firewood as a source of energy for cooking followed by charcoal (3.9), solar and paraffin/kerosene (0.1%).

Meals and Meat/Fish consumption

71 percent of the households in the region have 3 meals per day followed by 2 meals per day (28 percent) and 1 meal per day (0.6 percent). Songea urban district had the largest percent of

households eating one meal per day while Namtumbo had the least. 65% of the agricultural households in Ruvuma region consumed meat during the week preceding the census, 38 % consuming meat only once. 86% of the total agricultural households in Ruvuma region consumed fish at least once in the week preceding the census. Moreover, 3% of the household were food insecure during the year preceding the census. Mbinga district has fewer household reporting food insecurity.

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1 BACKGROUND INFORMATION

1.1 Introduction

This part of the report presents a brief description of the region by providing information on geographical location, land area, climate, administrative set up, population and socio-economic indicators. The information aims at providing the user with a general understanding of the region and its resources.

1.2 Geographical Location and Boundaries

Ruvuma region is situated in the southern part of the country along with Ruvuma and Lindi regions. It borders the Republic of Mozambique in the south, Lake Nyasa in the west and Iringa and Morogoro regions in the north. The region comprises five districts of Tunduru, Songea Rural, Mbinga, Songea Urban and Namtumbo. The region headquarters is located in Songea Urban District.

1.3 Land Area

The region has an area of 66,477 square kilometres, of which about 50,540 square kilometres are arable land. Also out of the total area 2,979 square kilometres are under water bodies while 63,498 square kilometres are land area. The forest reserves cover 6,958 square kilometres.

1.4 Climate

1.4.1 Temperature

The temperature in the region is moderately mild at an average temperature of 23°C depending on the altitude and season. The months of June, July and August are chilly with the temperature dropping to 13°C, particularly in the areas surrounding Matengo highlands in Mbinga district. October and November are the hottest months with an average temperature of 30°C in the lowlands.

1.4.2 Rainfall

The region has two seasons, the dry and the wet seasons. The dry season (Vuli) is from October to November and the wet season (Masika) from April to May. The average rainfall is between 800 and 1,800 millimetres. The amount varies from one district to another. Mbinga district has the highest average annual rainfall of 1,225 millimetres while Tunduru district has the lowest rainfall which is usually less than 900 millimetres per year.

1.5 Population

According to the 2002 Population and Housing Census, there were 1,117,166 inhabitants in Ruvuma region. The population of Ruvuma region ranked 17th out of the 21 regions of Tanzania Mainland.

1.6 Socio - Economic Indicators

The regional Gross Domestic Product (GDP) at current prices for the year 2008 was estimated to be TShs 1,006,828 Million with a per capita income of shillings 772,504. The region held 11th position among regions on GDP and contributed about 4.06 percent of the national GDP. The region is famous for producing both food and cash crops. The main food crops produced in Ruvuma region include: maize, beans, sorghum, cassava, millet, paddy, wheat, sweet potatoes, Irish potatoes, yams, sunflower, simsim and groundnuts. The main cash crops include cashew nut, tobacco and coffee. Livestock keeping is also an important economic activity in the region.

2 INTRODUCTION

This section provides technical and operational description of the National Sample Census of Agriculture (NSCA), carried out in the rural areas of Tanzania Mainland and Tanzania Zanzibar during the 2007/08 agricultural year. It details the background and the rationale for carrying out the NSCA in 2007/08 agricultural year. It also explains the sampling procedures, designing and implementation of the data processing system.

This report (Volume Vj) is among the 21 regional reports for the Mainland. Other Census reports include the Technical Report (Volume I), Crop Sector Report at National level (Volume II), Livestock Report at National level (Volume III), Large Scale Farms Report (Volume IV), Regional Reports (Volume Vj series), Zanzibar Livestock Report (Volume VI) and Zanzibar Crop Sector Report (Volume VII). Unlike the 2002/03 Agricultural Sample Census, the 2007/08 Sample Census does not have a separate report for Smallholder Household Characteristics and Access to Natural Resources Report. Other thematic reports will be produced depending on the demand and availability of funds.

This report is divided into five main sections; Background Information, Introduction, Census Results, District Profiles and Appendices. The definitions relating to all aspects of this report can be found in the questionnaire.

2.1 The Rationale for Conducting the National Sample Census of Agriculture

The Government of Tanzania has embarked on various plans geared to eradicate poverty by the year 2025 and Tanzania Zanzibar by the year 2020. In order to facilitate intervention and monitoring activities of the Poverty Monitoring Master Plan, the government has planned a series of censuses and surveys to assist in policy formulation, planning and to track changes in the wellbeing of the population of Tanzania. In this Master Plan, a series of Agricultural Censuses have been planned, the first one was undertaken in 2002/03 agricultural year and the second in 2007/08.

Demands for reliable and timely agricultural data have become significantly increasing for monitoring outcomes and progress of the poverty monitoring tools like the Agricultural Sector Development Programme (ASDP) and performance of the respective MDAs (ASLMs).

Following the decentralization of the Government's administration and planning functions, there has been a pressing need for agricultural and rural development data disaggregated at regional and

district level. The provision of district level estimates will provide essential baseline information on the state of agriculture that supports decision making by the Local Government Authorities and in the design of District Agricultural Development and Investment Projects (DADIPS). The increase in investment is an essential element in the national strategy for growth and reduction of poverty.

2.2 Census Objectives

The 2007/08 Agricultural Sample Census was designed to meet the data needs of a wide range of users down to the district level including policy makers at local, regional and national levels, rural development agencies, funding institutions, researchers, NGOs, farmers organizations, and the like. The dataset is both extensive in its sample and detailed in its scope and coverage to meet the user demand.

The census was carried out in order to:

- Identify structural changes, in the size of farm household holdings, crop and livestock production, farm inputs and implement use. It also seeks to determine if there are any improvements in the rural infrastructures and the level of agricultural household living conditions.
- Provide benchmark data on productivity, production and agricultural practices in relation to policies and interventions promoted by the Ministry of Agriculture and Food Security and other stakeholders.
- Establish baseline data for the measurement of the impact of high level objectives of the Agricultural Sector Development Programme (ASDP), National Strategy for Growth and Reduction of Poverty and other rural development programmes and projects.

2.2.1 Census Scope and Coverage

The 2007/08 Agricultural Sample Census was conducted for both large and small scale farms. The data was collected from a sample of 52,635 small scale agricultural households of which 48,880 were from the Mainland and 4,755 from Zanzibar. To meet National estimates, data was also collected from 1,006 Large Scale Farms (968 on the Mainland and 38 in Zanzibar) on a complete enumeration basis.

Three different questionnaires were used to collect data on agriculture and related aspects. These were:

- Small scale farms questionnaire;
- Community questionnaire; and
- Large scale farm questionnaire.

The small scale farm questionnaire was the main census instrument which included questions related to crop and livestock production and practices; population demographics; access to services; resources and infrastructure; issues on poverty and gender. Main subjects covered during the study include:-

- Household demographics and activities of the household members;
- Land access/ownership/tenure and use;
- Crop and livestock production and productivity;
- Access to inputs and farming implements;
- Access and use of credits;
- Crop marketing, storage;
- Fish farming;
- Investment activities: Irrigation structures, water harvesting, erosion control;
- Off farm income;
- Household living conditions (housing, sanitary facilities, etc);
- Livelihood constraints; and
- Poverty Indicators.

The community level questionnaire was designed to collect village data such as access and use of common resources, community tree plantation and seasonal farm gate prices.

Large Scale Farm questionnaire was administered to all the large scale farms either privately or corporately managed. However, the analysis of Large Scale Farms is presented in a separate report (Volume IV).

2.3 Census Methodology

The main focus at all stages of the census execution was on data quality and this has been emphasized all the time. The main activities undertaken include:

- Census organization;
- Tabulation plan preparation;
- Sample design;
- Design of census questionnaire and other instruments;
- Pilot test;
- Training of trainers, supervisors and enumerators;
- Information Education and Communication (IEC) campaign;
- Data collection;
- Field supervision and consistency checks;
- Data processing:
 - Scanning,
 - Structure formatting application,
 - Batch validation application,
 - Manual data entry application,
 - Tabulation preparation using SPSS;
- Table formatting and charts using Excel, maps generation using Arc GIS and Excel, Report preparation using Ms Word and Excel.

2.4 Census Organization

The census was conducted by the National Bureau of Statistics (NBS) in collaboration with Ministries of Agriculture, Food Security and Cooperatives, Livestock and Fisheries Development; Water; Industry and Trade; and the Prime Minister's Office, Regional Administration and Local Government in Tanzania Mainland. The Office of the Chief Government Statistician, (OCGS), Ministries of Agriculture and Natural Resources, Livestock and Fisheries in Tanzania Zanzibar.

At the national level, the Census was headed by the Director General of the National Bureau of Statistics, Tanzania Mainland in collaboration with the Chief Government Statistician, Tanzania Zanzibar. The planning Group formed by the Director General of NBS and the Chief Government Statistician consisted of staff from the Department of Agriculture Statistics of NBS, Department of Economic Statistics of OCGS, Department of Policy and Planning of the Ministry of Agriculture, Food Security and Cooperatives, Department of Policy and Planning of the Ministry of Livestock and Fisheries Development in the Mainland. Ministry of Livestock and Fisheries and the Ministry of Agriculture and Natural Resources in Zanzibar.

The Planning Group was responsible for all the census operations. Implementation of the census activities at the regional level was overseen by the Regional Statistical Managers of NBS and the Regional Agricultural Supervisors from the Prime Minister's Office, Regional Administration and Local Government. At the district level, the census activities were managed by two supervisors from the Prime Minister's Office, Regional Administration and Local Government (PMO-RALG). The supervisors managed the enumerators who also came from PMO-RALG. As for Zanzibar, implementation of the census activities at the regional level was overseen by the Regional Statistical Officers and Regional Agricultural Officers. At District level, implementation of the census activities was managed by District Agricultural Development Officers (DADOs). In addition, there was a national mobile team to supervise the census operations.

The Censuses and Surveys Technical Working Group (CSTWG) under MKUKUTA provided support in sourcing financing, approving budget allocation and monitoring progress of the census. A Technical committee for the census was established with members from key stakeholder organizations and its main function was to approve the proposed instruments and procedures developed by the Planning Group. It also approved the tabulation and analytical reports prepared from the census data.

2.4.1 Tabulation Plan Preparation

The tabulation plan was developed considering the tabulations from previous censuses and surveys to allow trend analysis and comparisons as well as the needs of end users.

2.4.2 Sample Design

The Mainland sample consisted of 3,192 villages. These villages were drawn from the National Master Sample (NMS) developed by the National Bureau of Statistics (NBS) to serve as national framework for the conduct of household based surveys in the country. The National Master Sample was developed from the 2002 Population and Housing Census. The total Mainland sample was 47,880 agricultural households. In Zanzibar, a total of 317 Enumeration Areas (EAs) were selected and 4,755 agricultural households were covered (Table 2.1). National wide, all regions and districts were sampled except four urban districts (three from Mainland and one from Zanzibar).

Table 2.1 Census Sample

Description	Mainland	Zanzibar	Total
Households	47,880	4,755	52,635
Villages/EAs	3,192	317	3,509
Districts	133	9	142
Regions	21	5	26

In both Mainland and Zanzibar, a two stage sample was used. The number of villages/Enumeration

Areas (EAs) was selected for the first stage with a probability proportional to the number of villages/EAs in each district. In the second stage, 15 households were selected from a list of households in each village/EA using systematic random sampling.

2.4.3 Questionnaire Design and Other Census Instruments

The questionnaire was designed following users meetings to ensure that the questions asked were in line with the users data needs. Several features were incorporated into the design of the questionnaire to increase the accuracy of the data as follows:

- Where feasible, all variables were extensively coded to reduce post enumeration coding errors;
- The definitions for each section were printed on the opposite page so that the enumerator could easily refer to the instructions whilst interviewing the respondent;
- The responses to all the questions were placed in boxes printed on the questionnaire, with one box per character. This feature made it possible to use scanning and Intelligent Character Recognition (ICR) technologies for data capture;
- Skip patterns were used to reduce unnecessary and incorrect coding of sections which do not apply to the respondent; and
- Each section was clearly numbered, which facilitated the use of skip patterns and provide a reference for data type coding for the programming of CSPro and SPSS.

Three other instruments were used:

- Village Listing Forms were used for the listing of households in the village/EA and from this list, a systematic sample of 15 agricultural households were selected;
- A training manual which was used by the trainer for the cascade/pyramid training of supervisors and enumerators; and
- Enumerator's Instructions Manual was used as reference material.

2.4.4 Field Pilot-Testing of the Census Instruments

The questionnaire was pilot-tested in four locations (Arusha, Dodoma, Unguja and Pemba). This was done to check the wording, flow and relevance of the questions and to finalize crop lists, questionnaire coding and manuals. In addition, several data collection methodologies had to be finalized, namely; livestock numbers in pastoral communities, mixed cropping, use of percentages in the questionnaire and finalizing skip patterns and documenting consistency checks.

2.4.5 Training of Trainers, Supervisors and Enumerators

During the training, a cascade/pyramid training techniques were employed to maintain statistical standards. The top level of training was provided to 78 national and regional supervisors (65 from Mainland and 13 from Zanzibar). The trainers were members of the Planning Group from the National Bureau of Statistics, the sector Ministries of Agriculture and Office of the Chief Government Statistician, Zanzibar. In each region, three training sessions were conducted for the district supervisors and enumerators. The training concentrated on questionnaires, listing forms, field level census methodology and definitions. Emphasis was placed on consistency checking in the field. Tests were given to the enumerators and supervisors and the best 50 percent of the trainees were selected for the actual field work. The remaining 50% were assigned the work of listing the households in the villages they belong and they were later terminated. The best trained enumerators were assigned to list the remaining villages. Each enumerator was assigned to enumerate two villages.

2.4.6 Information, Education and Communication (IEC) Campaign

Radios, televisions, newspapers, leaflets, t-shirts and caps were used to create awareness of the Agricultural Sample Census to the public. This strategy helped in sensitizing the public for the field level activities in order to increase the response rate. The t-shirts and caps were given to the field staff and the village chairpersons. The village chairpersons assisted to locate the selected households.

2.4.7 Data Collection

Data collection activities for the 2007/08 Agricultural Sample Census lasted for three months from June to August 2009. The direct interview method was used to collect data during the enumeration. Data collection was monitored by a hierarchical system of supervisors which included the Mobile Response Team, Regional and District Supervisors. The Mobile Response Team headed by the Manager of Agriculture Statistics Department, provided the overall direction to the field operations and responded to queries arising outside the scope of the training exercise. Decisions made on the

definitions and procedures were then communicated back to all the enumerators via the Regional and District Supervisors. On the Mainland, each region had 2 Regional Supervisors (total of 42) and 2 district supervisors per district (Total 266).

District supervision and enumeration were performed by staff from the Prime Minister's Office, Regional Administration and Local Government and the sector Ministry of Agriculture (PMO-RALG). Regional and national supervision was provided by senior staff from the NBS and sector Ministries of Agriculture. In Zanzibar, the enumeration was conducted by staff from the Ministry of Agriculture and Natural Resources and Ministry of Livestock and Fisheries. Supervision was provided by senior officers of the same Ministries and the Office of the Chief Government Statistician.

During the household listing exercise, some 3,192 extension staff participated on the Mainland. A total of 177 enumerators participated during the listing exercise and enumeration using the small holder questionnaire in Zanzibar. A total of 1,596 enumerators were involved in data collection using the small holder questionnaire on the Mainland. Additional five percent of the enumerators were held as reserves in case of drop outs during the enumeration exercise.

2.4.8 Field Supervision and Consistency Checks

Enumerators were trained to probe the respondents until they were satisfied with the responses before they recorded them in the questionnaire. The first check on the questionnaire was carried out by the enumerators in the field during enumeration, followed by District, Regional and National supervisors. Supervisory visits at all levels of supervision focused on checking the completeness of the questionnaires and consistency. Inconsistencies encountered were corrected, and where necessary, a call back to the respondent was made by the enumerator to obtain the correct information. Further quality control checks were made by the district supervisors.

2.4.9 Data Processing

Data processing involved the following process:

- Data entry;
- Data structure formatting;
- Batch validation; and
- Tabulation.

Data Entry

Scanning and ICR data capture technology was used. This did not only increase the speed of data entry but also increased the accuracy due to reduction of keystroke errors. Interactive validation routines were incorporated into the ICR software to trap errors during the verification process.

Prior to scanning, all the questionnaires underwent a manual cleaning exercise by checking that the questionnaire had a full set of pages, correct identification and good hand-writing. A score was given to each questionnaire based on the legibility and the completeness of enumeration. This score was used to assess the quality of enumeration and supervision. CSPro was used for data entry of the questionnaires that were rejected by the ICR extraction application.

Batch Validation

A batch validation program was developed in CSPro in order to identify inconsistencies within a questionnaire. This was in addition to the interactive validation during the ICR extraction process. The procedures varied from simple range checking within each variable to more complex checking between variables. After data cleaning, the tables were prepared based on a pre-designed tabulation plan.

Tabulation

Statistical Package for Social Sciences (SPSS) was used to produce the census tables and Microsoft Excel was used to organize the tables and compute the additional indicators. Excel was also used to produce charts while Arc GIS was used for generating the maps.

Report Writing

The report writing focused on the regional comparisons, time series and national estimates. Microsoft Excel was used to produce charts; Arc GIS and Excel were used to generate maps, whereas Microsoft Word was used in compiling and report writing.

Data Quality Control

A great deal of emphasis was placed on data quality throughout the whole exercise, from planning; questionnaire design, training, supervision, data entry, validation and cleaning/editing. As a result of this, it is believed that the census is highly accurate and representative of what was experienced at the field level during the census year. With very few exceptions, the variables in the

questionnaire are within the norms for Tanzania and they follow the expected time series trends when compared to historical data.

2.5 Funding Arrangements

The 2007/08 Agricultural Sample Census was supported mainly by the Department for International Development (DFID) and the Japan International Cooperation Agency (JICA) which together, financed most of the operational activities. Other funds for the census activities were from the Government of Tanzania. In addition, technical assistance was provided by the Food and Agriculture Organisation (FAO).

3 CENSUS RESULTS

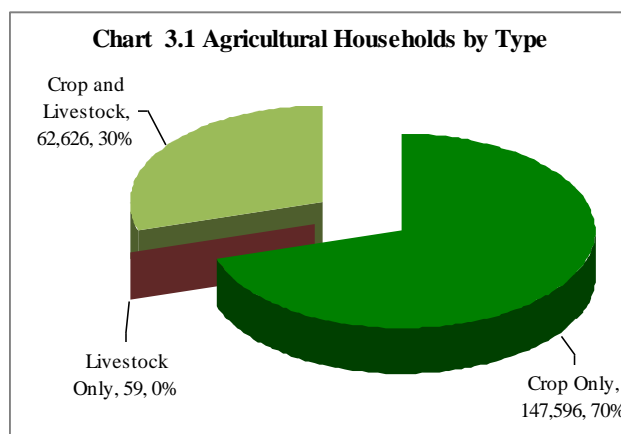
This part of the report presents the results of the census for Ruvuma region based on the statistical tables presented in Appendix AII. The results are presented in different forms including brief summaries, charts, condensed tables, graphs and maps in order to make it easy for the users to understand. Comparisons are made between related variables and between districts. Comparisons are also made with past censuses and surveys' results such as the 1994/95 National Sample Census of Agriculture (NSCA), the 1995/96 and the 1996/97 Expanded Agricultural Surveys, the 1997/98 Integrated Agricultural Surveys, the 1998/99 District Integrated Agricultural Survey and the 1999/2000 Rapid Agricultural Appraisal Survey.

The presentation of results is divided into four main sections which are household characteristics, crop results, livestock results and poverty indicators. Effort has been placed in analyzing the results in order to formulate solid conclusions.

3.1 Household Characteristics

3.1.1 Type of Household

The number of agricultural households in Ruvuma region was 210,281. The largest number of agriculture households was in Mbinga (83,636, 40%), followed by Tunduru (53,299, 25%), Songea Rural (32,983, 16%), Namtumbo (32,781, 16%) and Songea Urban (7,582, 4%) The highest density of households was found in Songea Urban (472/km²) followed by Mbinga (312/km²). Most of the households 147,596 (70%) were involved in growing crops only, 59 (0.03%) were rearing livestock only, and 62,626 (30%) were involved in crop production as well as livestock keeping (Chart 3.1, Map 3.01, 3.02).



3.1.2 Livelihood activities/Source of Income

In Ruvuma region most of the agricultural households ranked annual crop farming as the activity that provides most of their cash income followed by employment, other activities, livestock keeping and fishing (Table 3.1, Map 3.03, 3.04, 3.05 3.06).

Table 3.1 Livelihood Activities/Source of Income of the Households by District

District	Main Activity									
	Crop/Seaweed Farming		Livestock Keeping		Employment		Fishing		Other	
	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	49,219	92.3	0	0	3,158	5.9	0	0	921	1.7
Songea Rural	30,051	91.1	0	0	1,955	5.9	0	0	977	3
Mbinga	79,919	95.6	413	0.5	2,478	3	620	0.7	207	0.2
Songea Urban	6,184	81.6	89	1.2	1,130	14.9	0	0	178	2.4
Namtumbo	30,246	92.3	262	0.8	1,748	5.3	87	0.3	437	1.3
Total	195,620	93	764	0.4	10,469	5	707	0.3	2,720	1.3

3.1.3 Age and Sex of Heads of Household

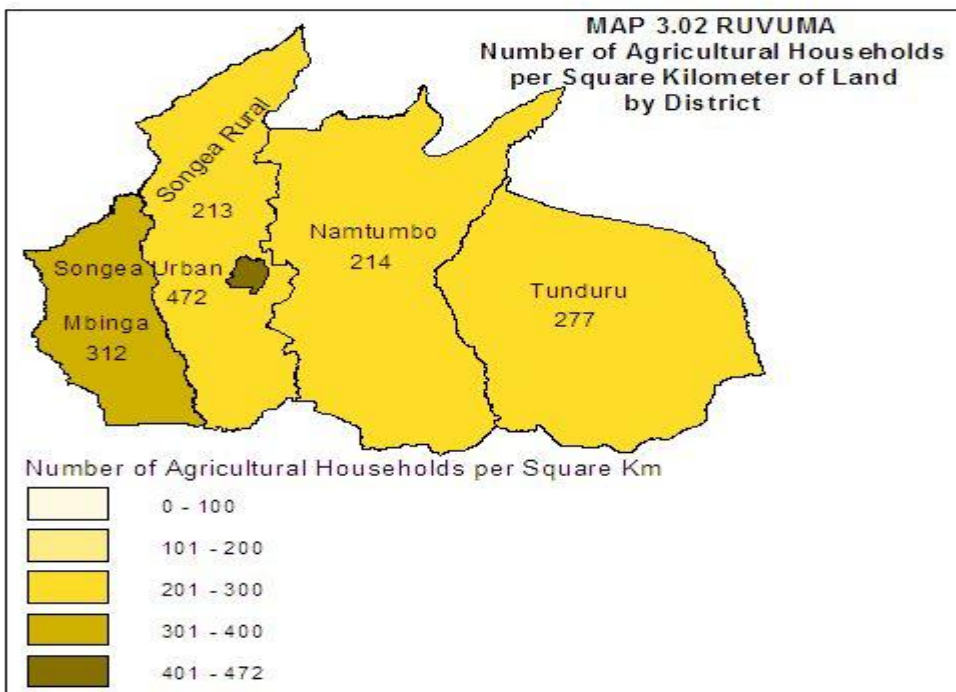
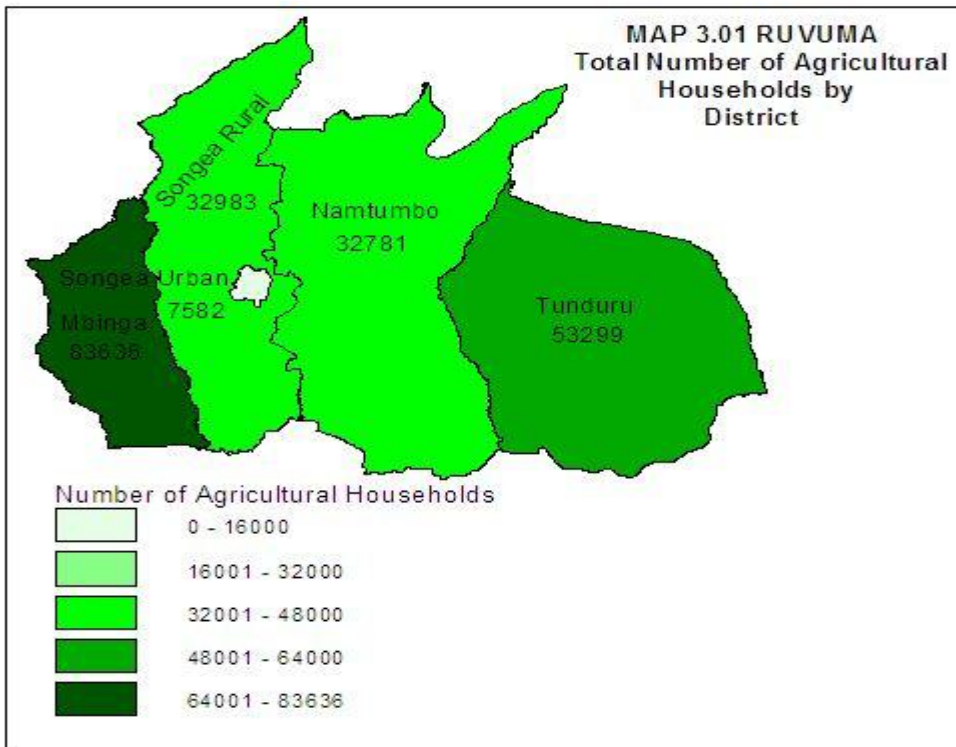
The number of male-headed agricultural households in Ruvuma region was 177,379 (84% of the total regional agricultural households) while the female-headed households were 32,902 (16% of the total regional agricultural households). The mean age of household heads was 43 years (43 years for male heads and 47 years for female heads (Table 3.2).

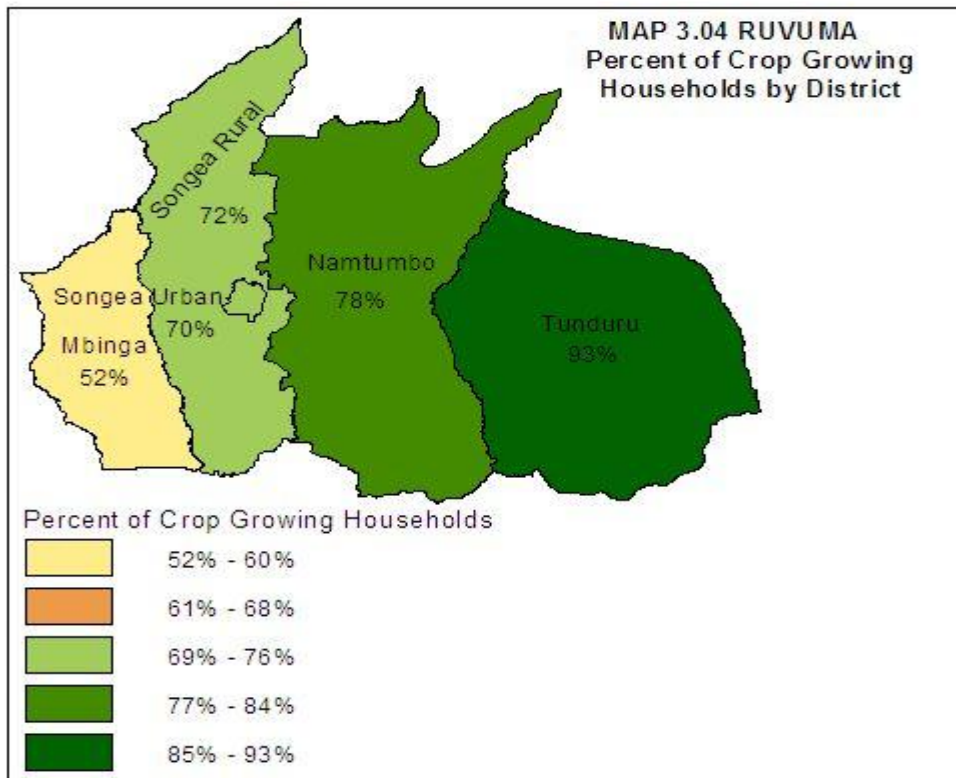
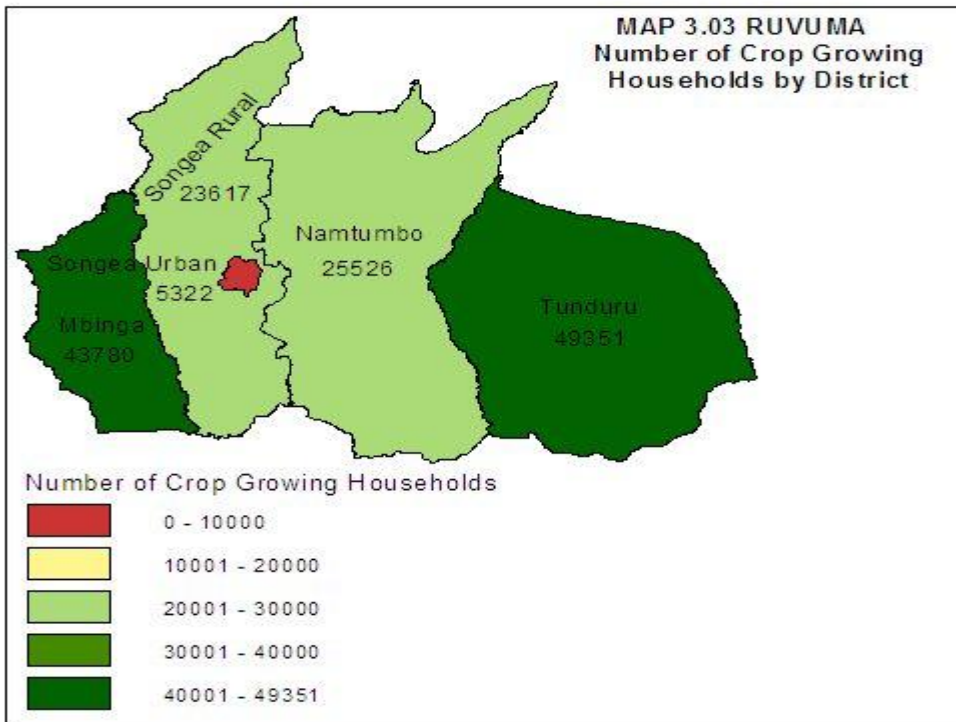
Table 3.2 Number of Male, Female Head of Agricultural Households and Mean Age of Heads of Households by District , 2007/08 Agricultural Year

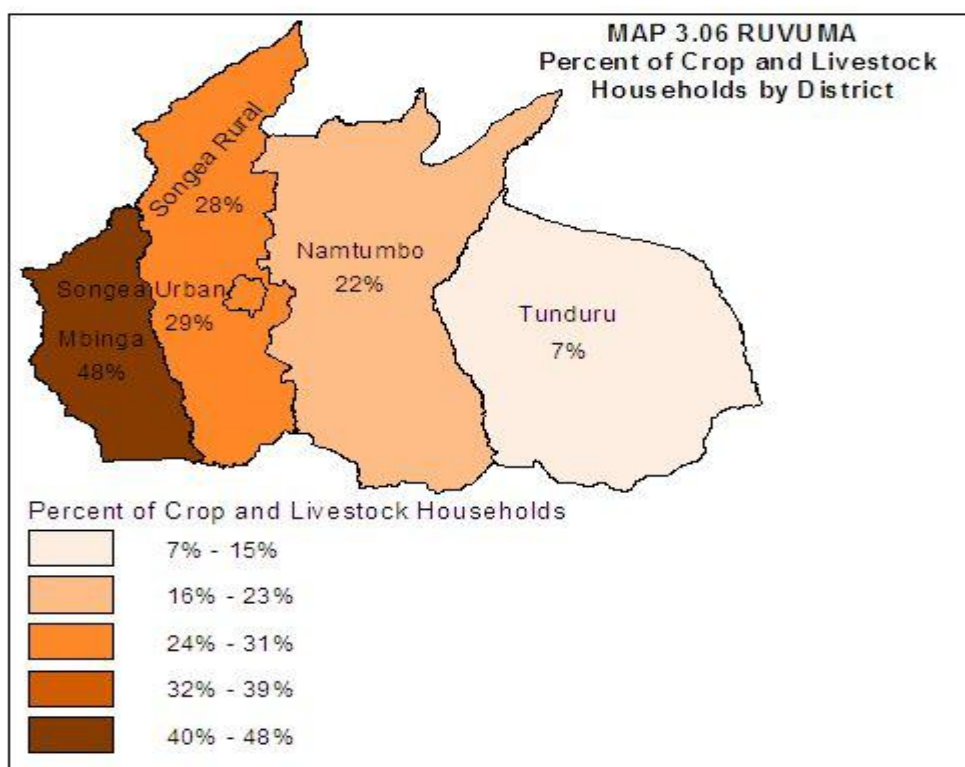
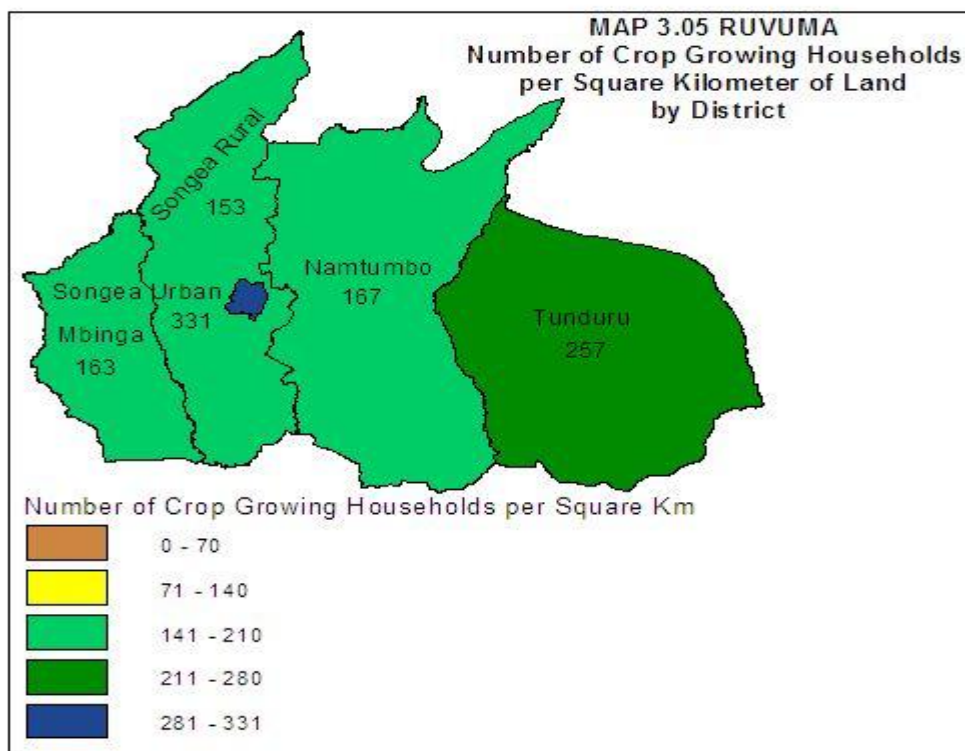
District	Male Headed Households	Percent	Female headed Households	Percent	Mean Age Male Head of Household	Mean Age Female Head of Household	Total Number of Agricultural Households
Tunduru	44,613	84	8,686	16	44	48	53,299
Songea Rural	26,793	81	6,189	19	45	46	32,983
Mbinga	70,420	84	13,217	16	40	46	83,636
Songea Urban	6,006	79	1,576	21	46	53	7,582
Namtumbo	29,547	90	3,234	10	44	44	32,781
Total	177,379	84	32,902	16	43	47	210,281

3.1.4 Number and Age of Household Members

Ruvuma region had a total rural agricultural population of 976,010 of which 474,451 (48.6%) were males and 501,559 (51.4%) were females. Whereas, age group 0-14 constituted 42 percent of the total rural agricultural population, age group 15-64 (active population) was 55 percent (Chart 3.2). Ruvuma region had an average household size of 4.6 with Namtumbo district having the highest household size of 5.2 and the lowest being Tunduru and Mbinga district each with 4.5 household sizes.





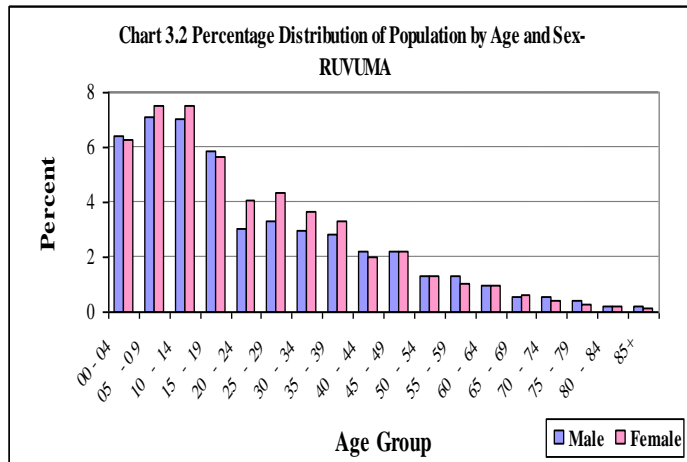


3.1.5 Level of Education

In order to obtain information on the level of education, information on literacy and education attainment were obtained for all persons aged five years and above in all households.

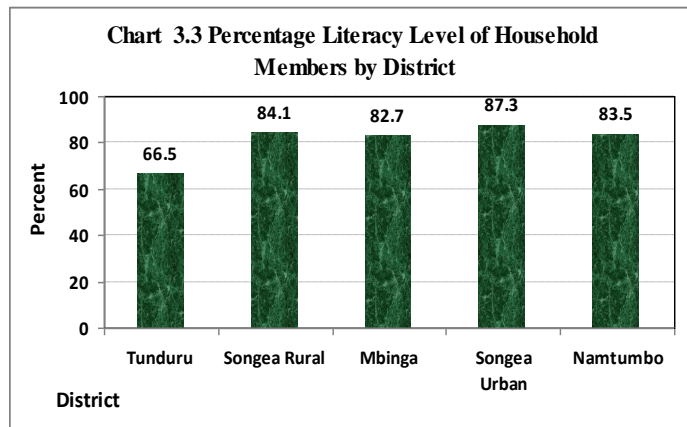
Literacy

The information on literacy level for family members aged five years and above was obtained by asking individual private households if their respective family members could read and write in Kiswahili only, English only, both English and Swahili or in any other language. Literacy is based on the ability to read and write Swahili, English or both.



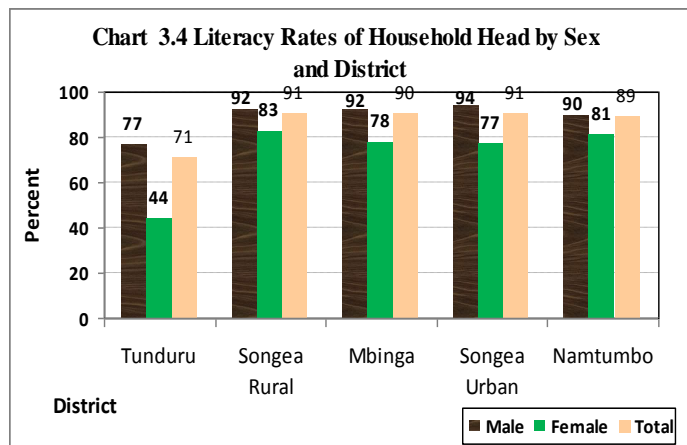
Literacy Level for Household Members

Ruvuma region had a total literacy rate of 79.3 percent an increase of 4% compared to levels of 2002/03. The highest literacy rate was found in Songea Urban district (87.3%) followed by Songea Rural (84.1%), Namtumbo (83.55) and Mbinga district (82.7%). Tunduru districts had the lowest literacy rates of 66.5 percent (Chart 3.3).



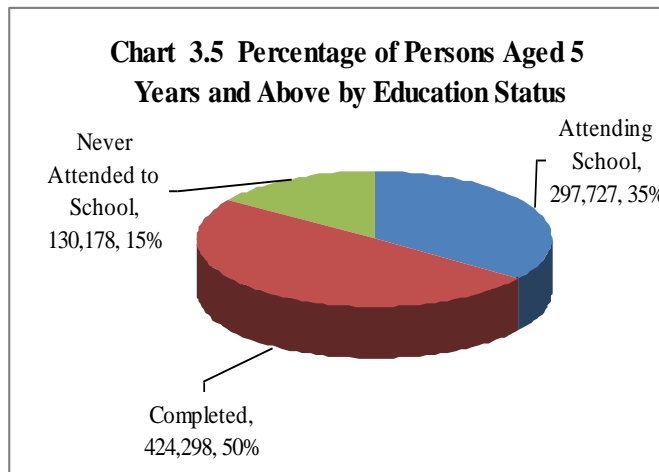
Literacy Rates for Heads of Households

The literacy rate for the heads of households in the region was 85 percent. The literacy rates for the male heads was 88 percent of the total male heads of households and that of female heads were 70 percent of the total female heads of households. The literacy rate of male heads was higher than that of female heads in all districts. Songea Rural and Songea Urban had the highest (91% each) literacy level, whilst, it was lower (71% of the total heads of households) in Tunduru district (Chart 3.4).

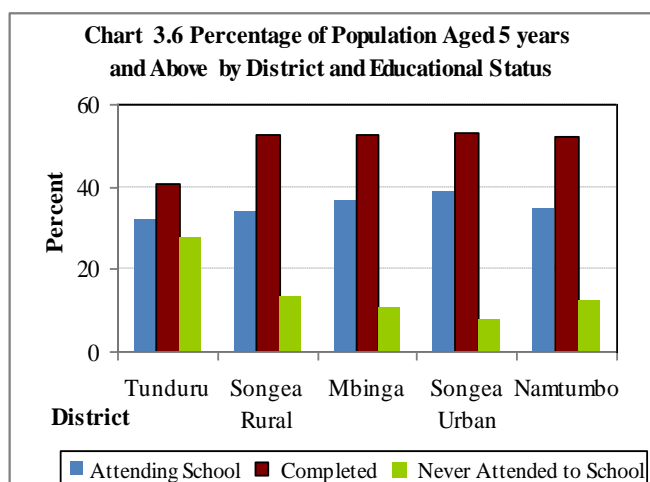


Educational Status

Information on educational status was collected from individual agricultural households. The results show that 50 percent of the population aged 5 years and above in agricultural households in the region had completed different levels of education and 35 percent were still attending school. Those who have never attended school were 15 percent (Chart 3.5).

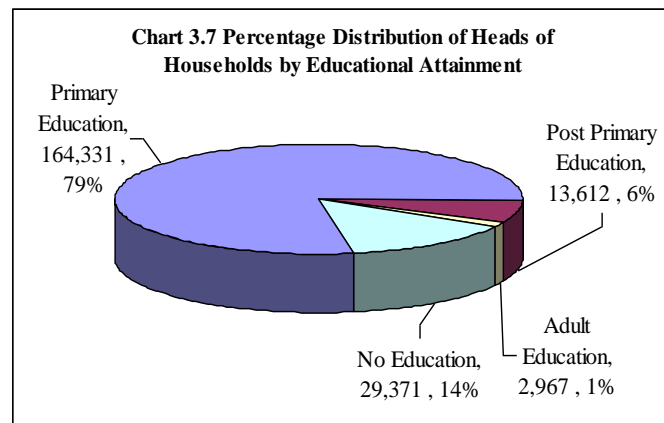


The percentage of those completed school has remained the same (50%) as that of 2002/03 agriculture sample census. The number of persons who had completed different levels of education varied between districts (Chart 3.6). However, Songea Urban, Songea Rural and Mbinga had the highest percent of person over five years who completed different levels of education (53% each of the population aged 5 years and above in the district). It was followed by Namtumbo (52%). Tunduru had the lowest percentage of the population aged 5 years and above who completed different levels of education (41%) and the highest percentage of the population aged 5 years and above whom have never attended school (27%).



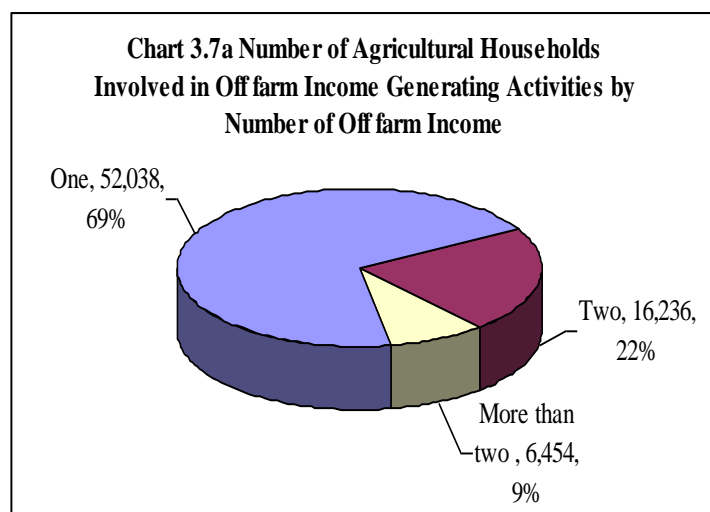
The number of heads of agricultural households with formal education in Ruvuma region was 177,943 (84.6%), those without education were 29,371 (14%) and those with only adult education were 2,961 (1%). The majority of heads of agricultural households (78%) had primary level education whereas only 6 percent had post primary education.

With regard to the heads of agricultural households with primary or post primary education in Ruvuma region, Songea Urban had the highest (86%) percentage for primary education. This was followed by Mbinga (85%) and Songea Rural and Namtumbo each with 81 percent. Tunduru had the lowest percentage of heads of households with primary education (62%) and the highest percentage of heads of household with no education (Chart 3.7).



3.1.6 Off-farm Income

Off-farm income refers to cash generated from non-agricultural activities. This can be either from permanent employment (i.e., government, private sector or other), temporary employment or labourers. It also includes cash generated from working on farms belonging to other farmers. Off-farm income is important in agriculture households in Ruvuma with 35 percent of households involved in off-



farm income generating activities. In Ruvuma region, of the households with a member engaged in off-farm income generating activities, 52,038 households (69%) had only one off-farm income generating activity, 16,236 households (22%) had two off-farm income generating activities and 6,454 households (9%) had more than two off-farm income generating activities (Chart 3.7a). Songea Urban district had the highest percentage of agriculture households engaged in off-farm income generating activities (65.5% of total agriculture households in the district). Other districts with high percentages were Songea Rural (46.4%) and Mbinga (38%). Tunduru and Namtumbo districts had the lowest percentages of agriculture households with off-farm income (27.4% and 24.5% respectively).

The district with the highest percent of agriculture households having more than one off-farm income was Songea Urban (37% of the households with off farm income generating activities).

Namtumbo district had few households with more than one off-farm income generating activities (17%), (Table 3.3).

Table 3.3 Number of Agricultural Households Involved in Off farm Income Generating Activities by Number of Off farm Income Activities and District , 2007/08 Agricultural Year

District	One Off Farm Income		Two Off Farm Income		More than two Off Farm Income		Households with Off farm Income	% of Household With Off farm Income	Total Agricultural Households
	Number of Households	%	Number of Households	%	Number of Households	%			
Tunduru	9,607	66	3,816	26	1,184	8	14,608	27	53,299
Songea Rural	10,913	71	3,339	22	1,059	7	15,310	46	32,983
Mbinga	22,510	71	6,402	20	2,891	9	31,802	38	83,636
Songea Urban	3,152	63	1,368	28	446	9	4,965	65	7,582
Namtumbo	5,857	73	1,311	16	874	11	8,042	25	32,781
Total	52,038	70	16,236	22	6,454	9	74,728	36	210,281

3.2 Land Use

Land area and *planted area* are two different types of area measurements. Land area refers to the physical area of land and is the same regardless of the number of crops planted on it in one year. Planted area is the total area of crops planted in a year and the area is summed if there were more than one crop on the same land per year. A number of terms have been used in this section which requires definition for clarification as follows:

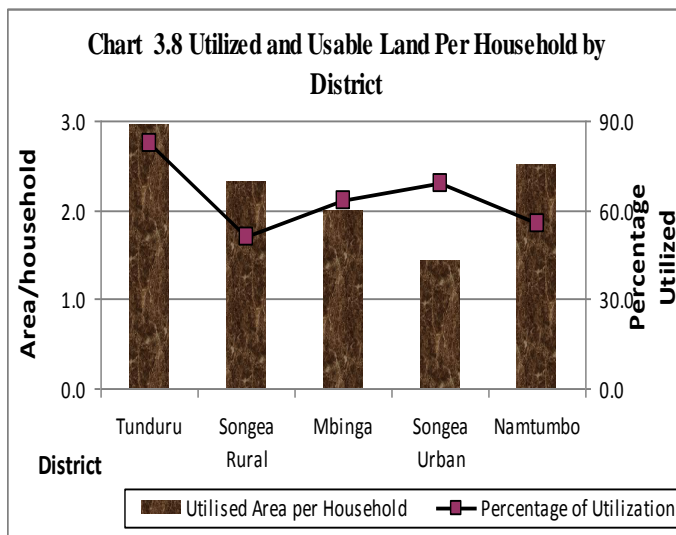
Land available refers to the area of land that has been allocated to smallholders through customary law, official title or other forms of ownership. Land available does NOT mean the total area of land that is designated as agriculture land in the country, but the land that is available to smallholders given the location of villages and lack of access to more remote parcels of unused agriculture designated land.

Usable land refers to the available land minus the land that cannot be used e.g. bare rock, shallow soils, steep slopes, swamp areas etc. It does however include un-cleared bush. Utilised land refers to the land that was used during the agricultural year.

3.2.1 Area of Land Utilized

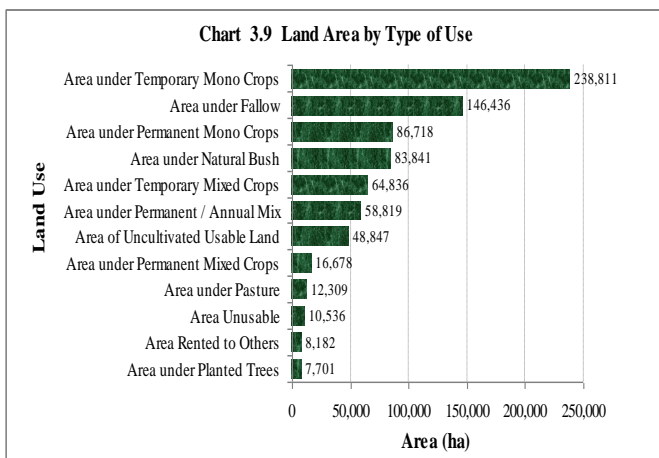
The total area of land available to smallholders was 773,178 ha. The Regional average land area utilised for agriculture per household was only 2 ha. This figure is the same as the National average, estimated at 2.0 hectares. 64 percent of the total land available to smallholders was utilized.

Large differences in land area utilised per household exist between districts with Tunduru and Namtumbo having an average of 3 ha each, followed by Songea Rural and Mbinga each with 2 ha. Songea Urban had the least utilised area per household (1 ha). On average the percentage utilization of land in Ruvuma was 64 percent. It was highest in Tunduru (82%) and lowest in Songea Rural (50%). Songea Urban had lowest area per household, but the percent utilization was second highest after Tunduru (68%) (Chart 3.8, Map 3.07).



3.2.2 Types of Land Use

The area of land under temporary mono-crops was 238,811 hectares (30.5% of the total land available to smallholders in Ruvuma), followed by fallow (146,436 ha, 18.7%), permanent/monocrops (86,718 ha, 11.1%), Natural bush (83,841 ha, 10.7%), Temporary Mixed crops (64,836 ha, 8.3%), Permanent annual/mixed crops (58,819 ha, 7.5%) and uncultivated land (48,847 ha, 6.2%). Land areas for other uses were less than 20,000 hectares each (Chart 3.9).

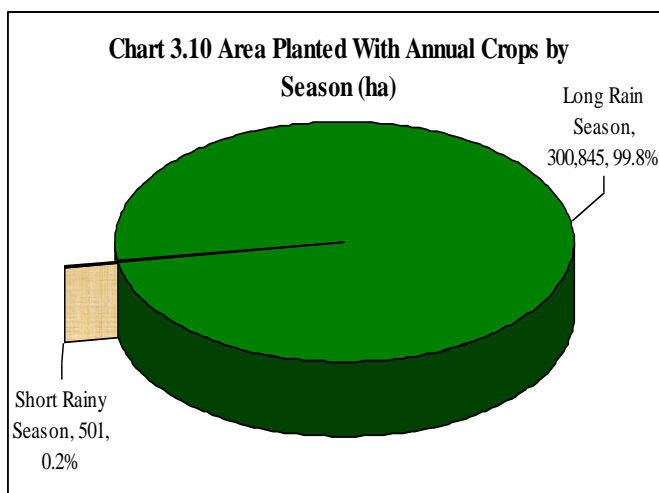


3.3 Annual Crop and Vegetable Production

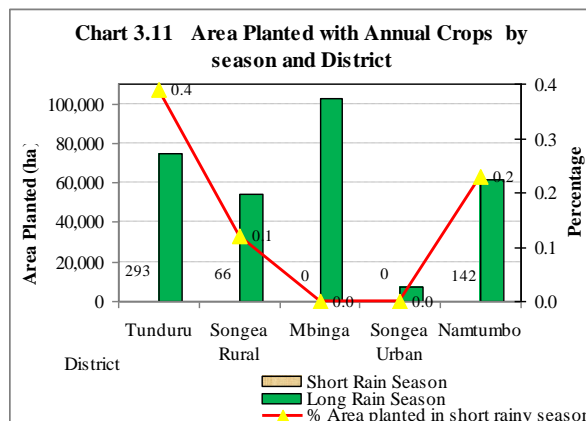
Ruvuma region has two seasons, namely the dry season (October to November) and the wet season (April to May).

3.3.1 Area Planted

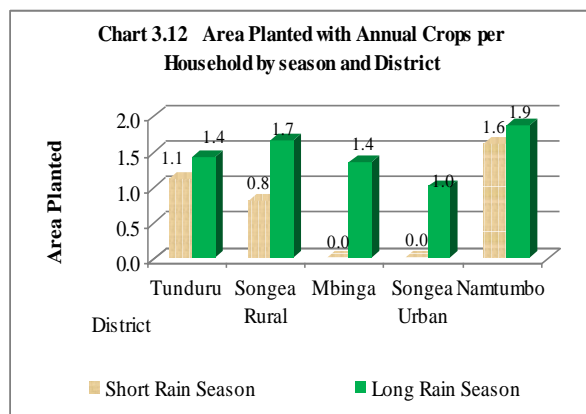
The area planted with annual crops and vegetables was 301,346 hectares out of which 501 hectares (0.2%) were planted during short rainy season and 300,845 hectares (99.8%) during



long rainy season (Chart 3.10). Mbinga and Songea Urban had the largest area planted with annual crop and vegetables during the long rain season as compared to the area planted in the short rain season (102,368 ha, 100% and 7,571 ha, 100% of the total area planted during the short and long rain seasons) followed by Songea Rural (54,406 ha, 99.9%), Namtumbo (61,753 ha, 99.8%) and Tunduru (75,248 ha, 99.6%) (Chart 3.11 and Map 3.08). During the short rains, only Tunduru, Songea rural and Namtumbo reported to cultivate annual crops and vegetables. The respective area figures were 293, 66 and 142 hectares for the three districts respectively.

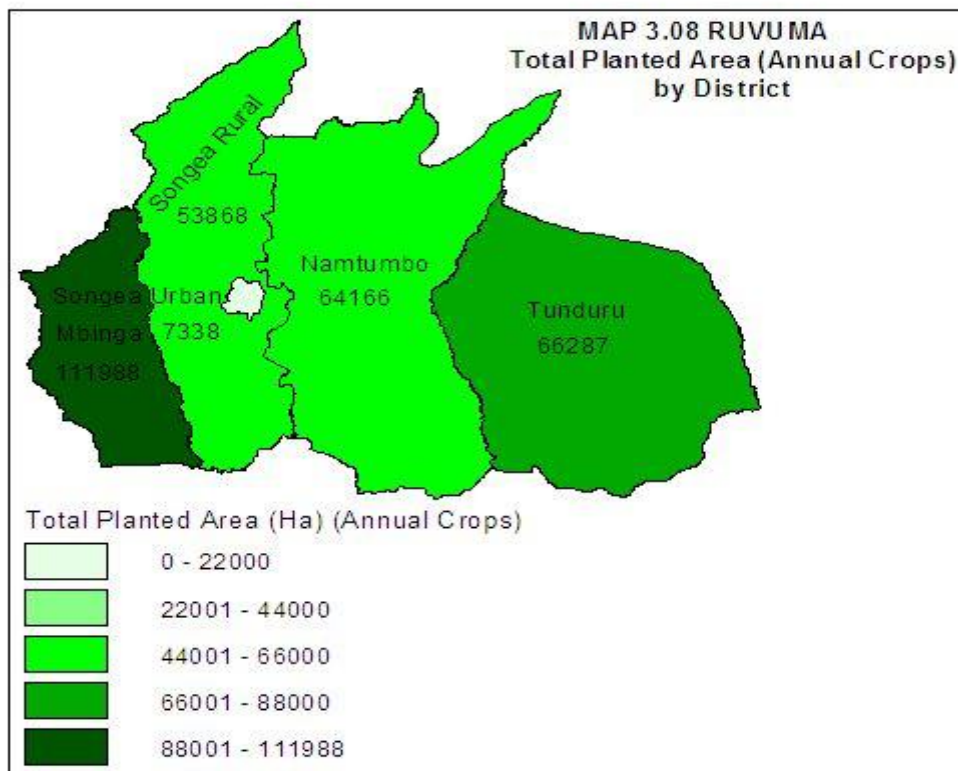
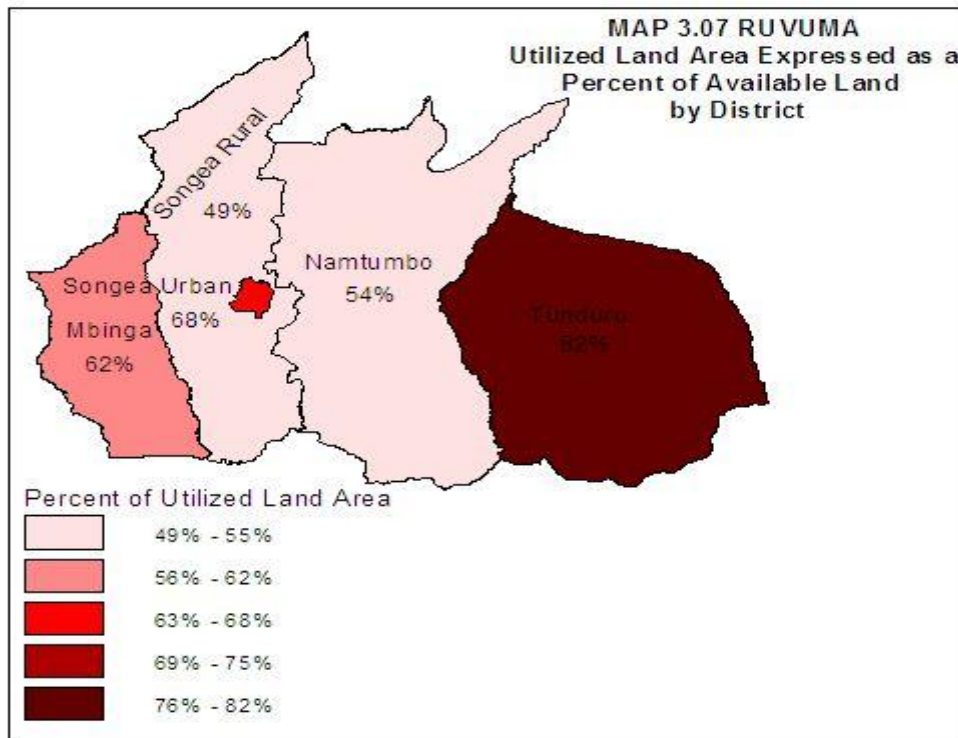


The average areas planted per household during the short and long rain seasons were 1.2 ha and 1.5 ha respectively (Map 3.9). The district with the largest planted area per household during the long rain season was Namtumbo (1.9 ha) followed by Songea Rural (1.7 ha), Tunduru and Mbinga each with 1.4 ha. The least area was in Songea Urban (1.0 ha), (Chart 3.12, Map 3.09).



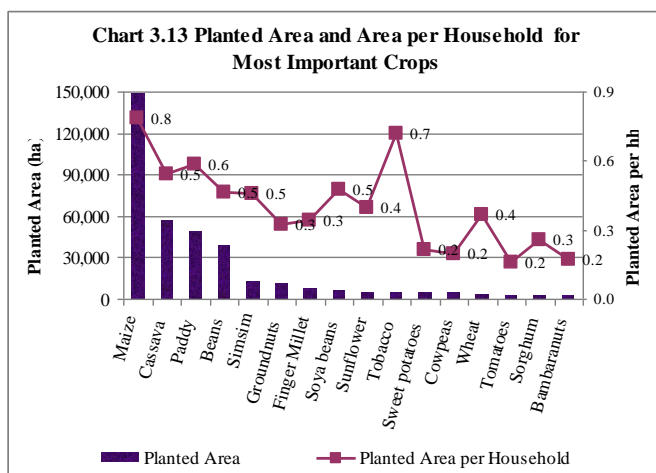
Analysis of the Most Important Crops

Results on crop production are presented in two different sections. The first section compares the importance of each crop regardless of whether it is annual or permanent. The second section contains an analysis on production based on crop types.



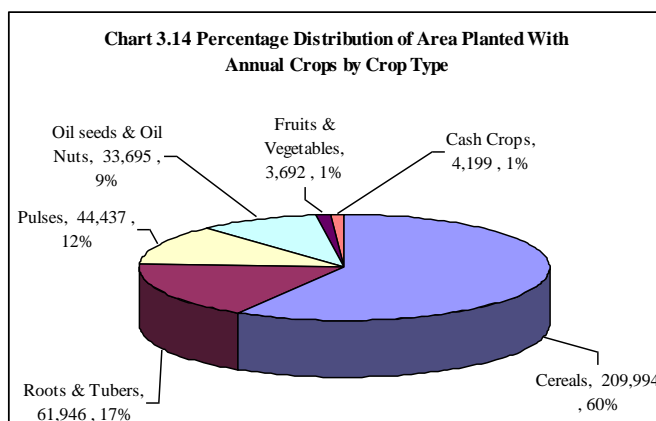
3.3.2 Crop Importance

Maize was the dominant annual crop grown in Ruvuma region and it had a planted area of about 3 times greater than cassava, which had the second (19%) largest planted area. The area planted with maize constituted 50 percent of the total area planted with annual crops in the region. Other crops in order of their importance (based on area planted) were paddy (16%) and beans (13%). simsim, groundnuts, finger millet, soybean, sunflower, tobacco, Sweet potatoes, cowpeas, wheat, tomatoes, sorghum and bambaranuts each accounted for less than 5 percent. Households that grew maize, tobacco and paddy had larger planted areas per household than other crops (Chart 3.13).



3.3.3 Crop Types

Cereals are the main crops grown in Ruvuma region. The planted area occupied by cereals was (209,994 ha, 60% of the total area planted with annual crops) followed by roots and tubers (61,946 ha, 17%), pulses (44,437 ha, 12%), oil seeds and nuts (33,695 ha, 9%) and cash crops and fruit & vegetables occupied one percent each (Chart 3.14).



Cereals, roots and tubers and pulses were the dominant crops in both seasons and other crop types were of minor importance in comparison. There was little difference in the proportions of the different crop types grown between seasons and because the production in the short rain season was very small compared to that of the long rain season, it is inappropriate to make detailed comparisons between the two seasons.

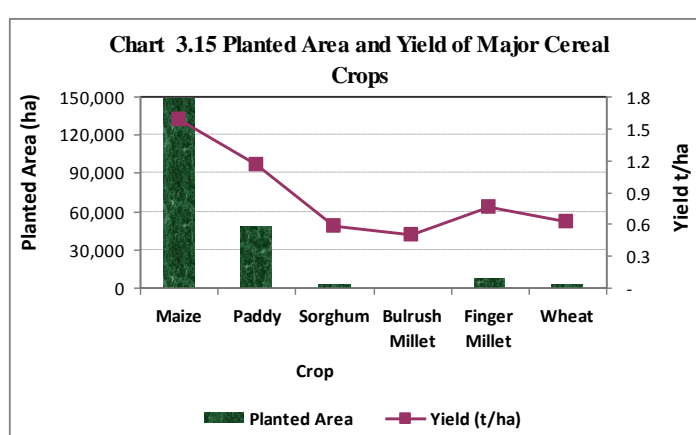
3.3.4 Cereal Crop Production

The total production of cereals was 300,740 tonnes. Maize was the dominant cereal crop with 236,602 tonnes which was 78.7 percent of total cereal production, followed by paddy (55,675 tonnes, 18.5%), finger millet (5,555 tonnes, 1.8%), wheat (1,673 ha, 0.6%) and sorghum (1,203 ha, 0.4%). Yield of bulrush millet was the lowest (Table 3.4).

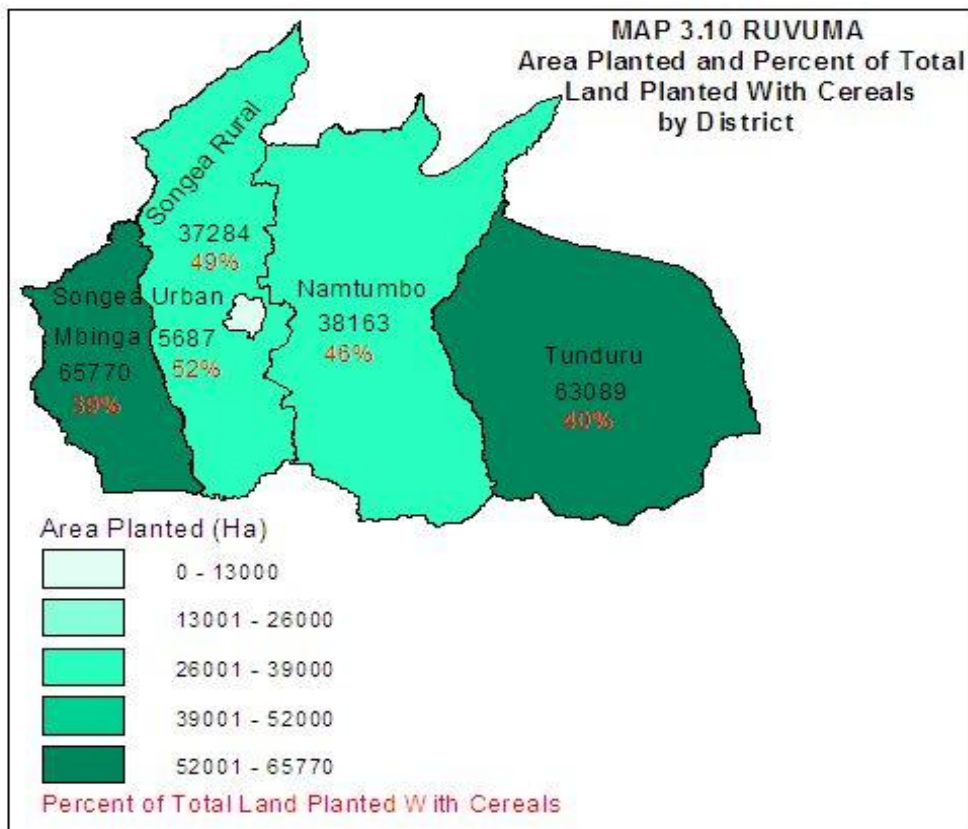
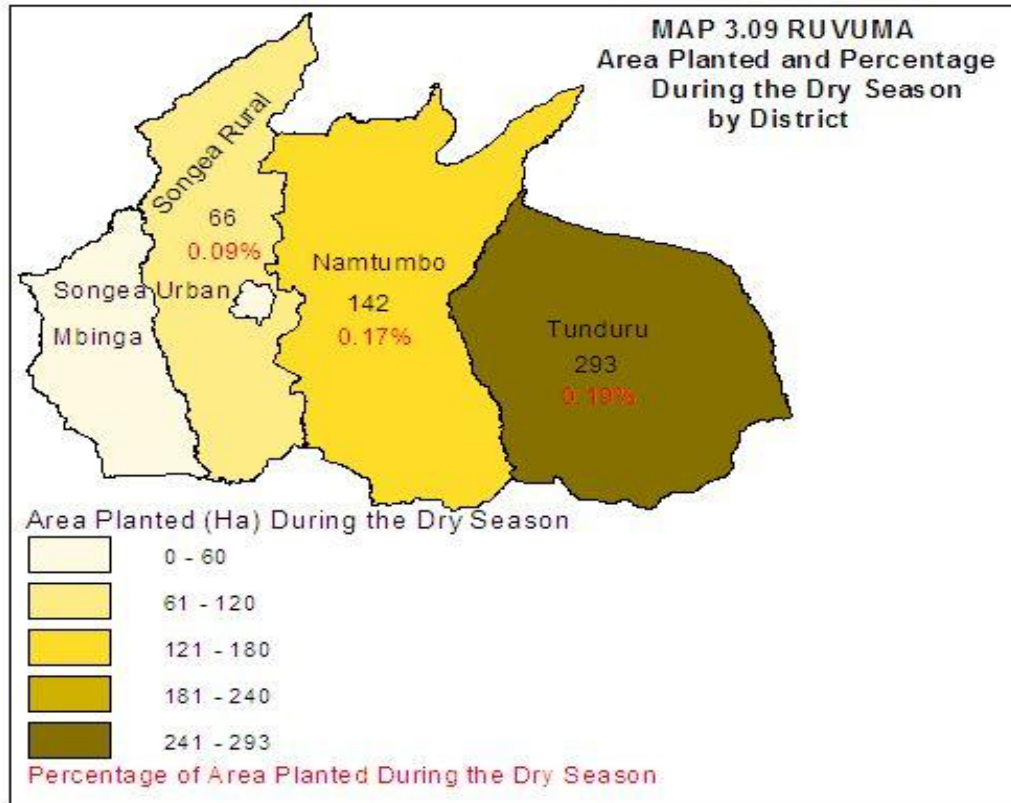
Table 3.4 Area, Production and Yield of Cereal Crops by Season

Crop	SHORT RAINY SEASON			LONG RAINY SEASON			Total		
	Planted Area (hectare)	Quantity Harvested (tons)	Yield (t/ha)	Planted Area (hectare)	Quantity Harvested (tons)	Yield (t/ha)	Planted Area (hectare)	Quantity Harvested (tons)	Yield (t/ha)
Maize	207	554	2.7	149,109	236,048	1.6	149,316	236,602	1.6
Paddy	176	97	0.6	48,313	55,577	1.2	48,489	55,675	1.1
Sorghum	21	9	0.4	2,073	1,191	0.6	2,094	1,201	0.6
Bulrush Millet	0	.	.	71	35	0.5	71	35	0.5
Finger Millet	8	13	1.6	7,278	5,542	0.8	7,287	5,555	0.8
Wheat	0	.	.	2,737	1,673	0.6	2,737	1,673	0.6
CEREALS	413	674	1.6	209,580	300,066	1.4	209,994	300,740	1.4

Mbinga district had the largest planted area of cereals in the region (65,770 ha) followed by Tunduru (63,089 ha), Namtumbo (38,163 ha), Songea Rural (37,284) and Songea Urban (5,687 ha). The yield of maize was 1.6 t/ha, followed by paddy (1.1 t/ha), finger millet (0.8 t/ha), sorghum and wheat (0.6 t/ha each) and bulrush millet (0.5 t/ha) (Chart 3.15, Map 3.10).

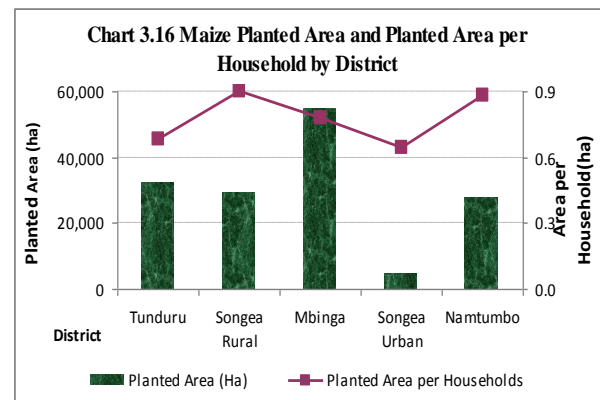


The total area planted with cereals during the short and long rain seasons was 209,994 ha out of which 413 ha (0.2%) was planted in the short rain season and 209,580 ha (99.8%) was planted during the long rain season. The long rain season accounted for 97.7 percent of the total cereals produced in both seasons (Table 3.4).



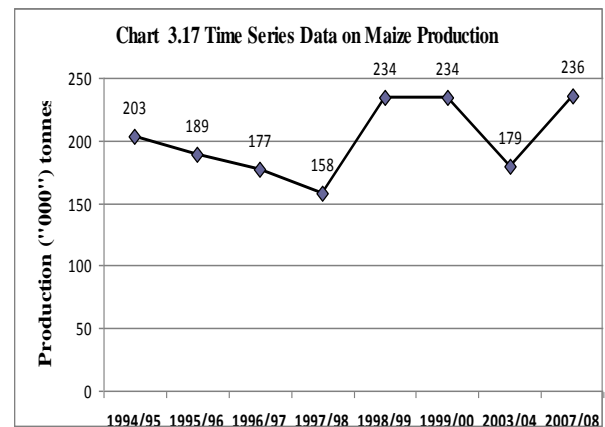
3.3.4.1 Maize

Maize dominates the production of cereal crops in the region. The number of households growing maize in Ruvuma region during the short and long rain season was 190,175 (90.5% of the total crop growing households in the region). The total production of maize was 236,602 tonnes from a planted area of 149,316 hectares resulting in a yield of 2 t/ha. The average area planted with



maize per household was 0.8 hectare; however it ranged from 0.64 hectares in Songea urban to 0.9 hectares in Songea Rural (Chart 3.16). Mbinga district had the largest area of maize (54,973 ha) followed by Tunduru (32,248 ha), Songera Rural (29,283 ha) and Songea Urban (4,779 ha) (Map 3.11 & 3.12).

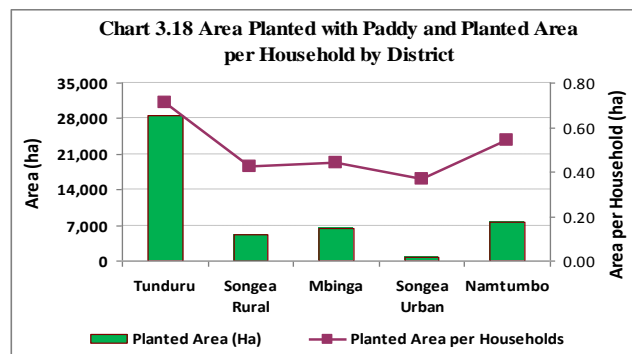
Chart 3.17 show production trends (in thousand metric tonnes) for maize. From 1994 to 1998 maize production consistently decreased from 203,000 tones to 158,000 tonnes. The trend was reversed thereafter whereby there was a sharp increase in maize production (48%) in 1999 after which the production levelled in 2000 and then it declined during the year 2003. Between 2003 and 2008 production increased by 32 percent from 179,000 tonnes to 236,000 tonnes, giving an equivalent of 6.4 percent annual growth over the five year period. Between 2003 and 2008 the area under maize increased from 139,505 ha to 149,316 ha whilst, yield per hectare increased from 1.3 t/ha to 2 t/ha.



3.3.4.2 Paddy

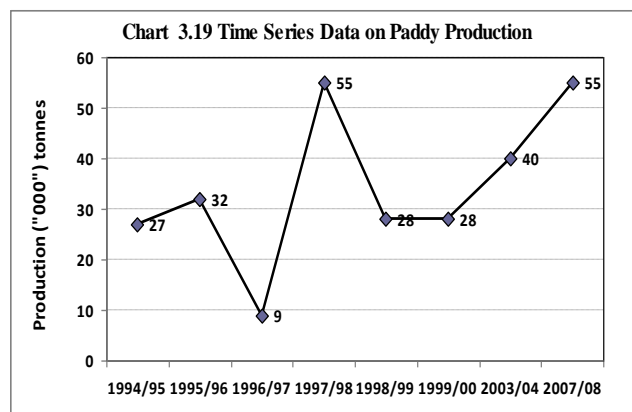
Paddy was the second most important cereal crop in the region in terms of planted area. The number of households that grew paddy in Ruvuma region was 83,246. This represented 39.6 percent of the total crop growing households in Ruvuma region. The total production of paddy was 55,675 tonnes from a planted area of 48,489 hectares resulting in a yield of 1.1 t/ha.

The district with the largest area planted with paddy was Tunduru (28,691 ha, 59% of total area planted with paddy) followed by Namtumbo (7,676 ha, 16%), Mbinga (6,317 ha, 13%), Songea Rural (5,116 ha, 11%) and Songea Urban (689 ha, 1%) (Chart 3.18, Map 3.13). There were small variations in the average area planted per crop growing household among the districts with the areas ranging from 0.37 ha in Songea Urban to 0.71 ha in Tunduru (Chart 3.18 and Map 3.14).



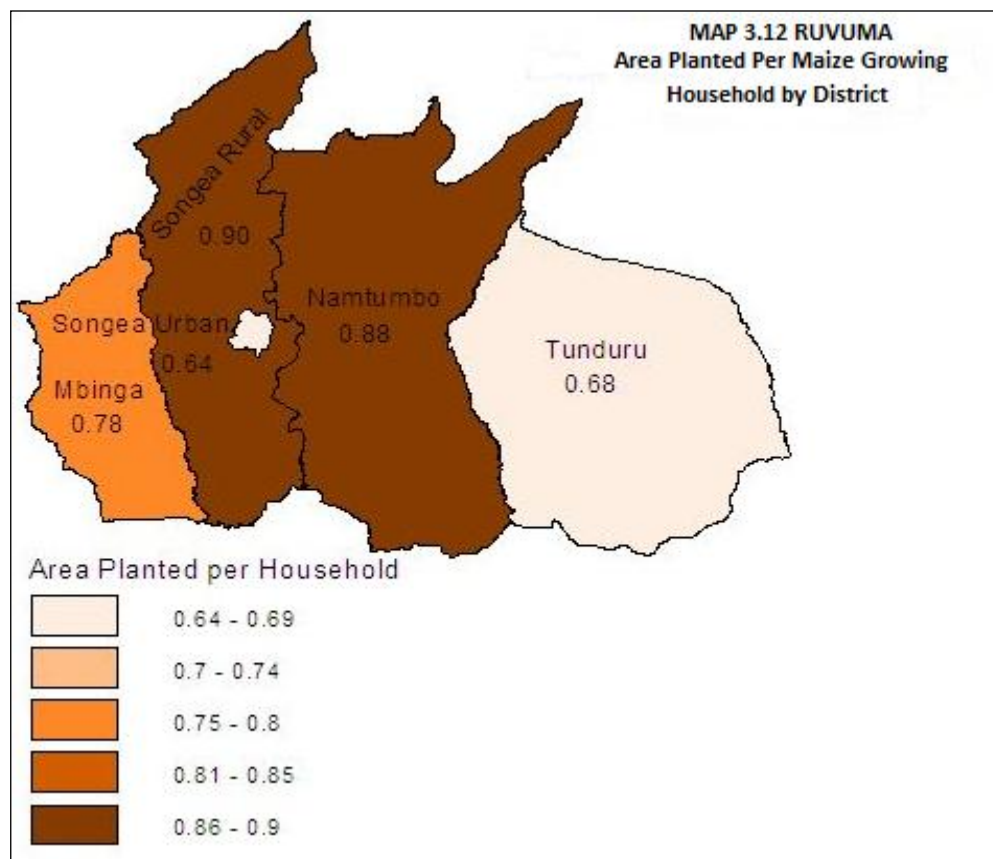
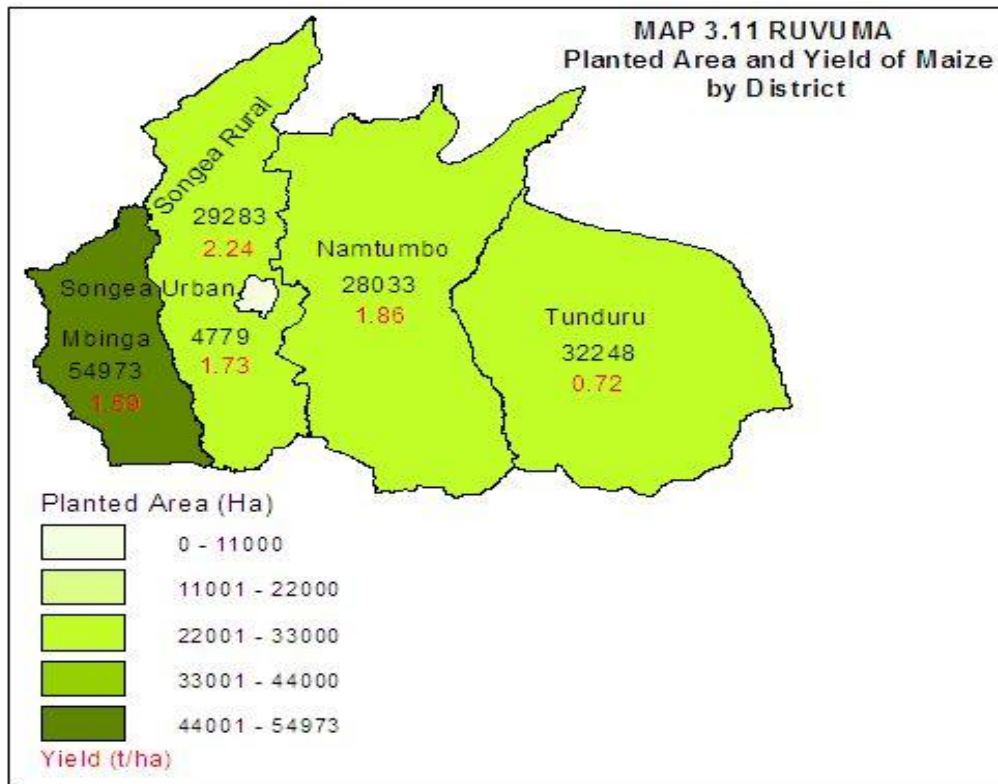
There was a decline in the production of paddy from 1995/96 (32,000 tons) to 1996/97 (9,000 tons) there after a sharp rise in production from 1996/97 to 1997/98 (55,000 tons). Then a drop between 1997/98 and 1998/99 (28,000 tons) observed after that a constant production from 1998/99 to 1999/2000 (28,000 tons) followed by a rise to 2002/2003 (40,000 tons). Between 2003 and 2008 paddy production continued to increase at a rate of 8 percent annually (40% cumulative) and the total production was 55,675 tonnes.

The increase in paddy production can be explained by increase in planted area whereby the area under paddy increased from 38,178 ha to 48,489 ha while production per ha has remained nearly constant (1.03 t/ha in 2003 and 1.1 t/ha in 2008) (Chart 3.19).



3.3.4.3 Other Cereals

Other cereals were produced in small quantities. These include sorghum, wheat, finger millets, and bulrush millets. A total of 12,188 tonnes of other cereals was produced in 2007/08 agricultural year. Tunduru had the largest planted area of sorghum (1,995 ha). Songea Rural, Songea Urban, Mbinga and Namtumbo had an area of less than 50 hectares each. Bulrush millet was grown in Namtumbo district only (71 ha), while the largest area planted with finger millet was in Songea Rural (2,838 ha) followed by Namtumbo (2,347) Mbinga (1,734 ha), Songea Urban (212 ha) and Tunduru (155 ha). Wheat was grown in



three districts in the region, with Mbinga district having the largest planted area (2,726 ha), however, in Songea Rural and Songea Urban the area planted with wheat was very low (Chart 3.20).

3.3.5 Roots and Tuber Crop Production

There were 128,708 households growing roots and tubers crop. The total production of roots and tubers was 108,594 tonnes from a planted area of 61,946 hectares. Cassava occupied the largest area planted with roots and tubers (56,863 ha, 91.8% of the area planted with roots and tubers), followed by sweet potatoes (3,990 ha, 6.4%), cocoyam (525 ha, 0.8%), Irish potatoes (342ha, 0.6%) and yams (226 ha, 0.4%). Area planted per household was small for all roots and tubers and ranged from 0.02 ha for yams to 0.5 ha for cassava. Cassava production was higher than any other root and tuber crop in the region with a total production of 100,116 tonnes representing 92.2 percent of the total root and tuber crops production. This was followed by sweet potatoes with (7,488 tonnes, 6.9%), cocoyam (515 tonnes, 0.5%), Irish potatoes (328 tonnes, 0.3%) and yams (146 tonnes, 0.1%). Estimated yield was high for sweet potatoes (2.2 t/ha) and cocoyam (2.0 t/ha), followed by yams (1.8 t/ha), Irish potatoes (1.6 t/ha) and cassava (1.2 t/ha) (Chart 3.21 & Table, 3.5).

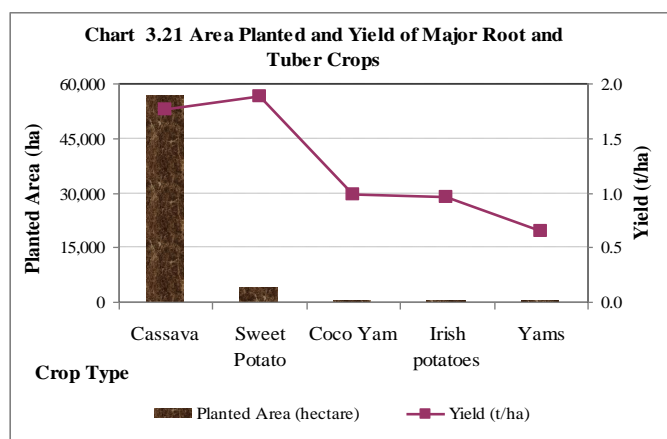
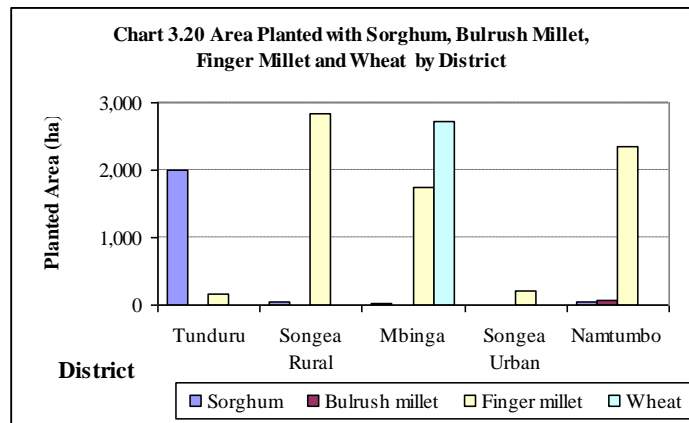


Table 3.5 Area, Production and Yield of Root and Tuber Crops by Season

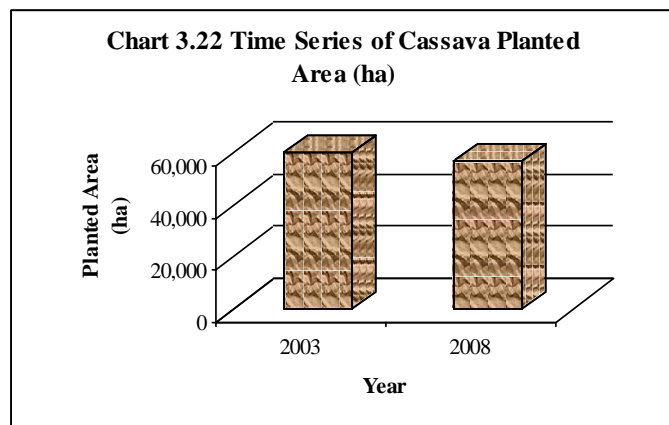
Crop	Short Rain Season			Long Rain Season			Total		
	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Cassava	.	.	.	56,863	100,116	1.8	56,863	100,116	1.8
Sweet Potato	16	33	2.0	3,974	7,455	1.9	3,990	7,488	1.9
Irish potatoes	.	.	.	342	328	1.0	342	328	1.0
Yams	.	.	.	226	146	0.6	226	146	0.6
Coco Yam	.	.	.	525	515	1.0	525	515	1.0
Total	16	33	2.0	61,930	108,561	1.7	61,946	108,594	1.8

It is difficult to determine the total planted area and production for the short and long rain seasons for roots and tubers as the total production of cassava has been reported under the wet season. This is because it was not possible to separate cassava production in the different growing seasons as the growth period spans both seasons and even over a year in certain varieties. Because of this, cassava has been combined and is reported in the wet season only.

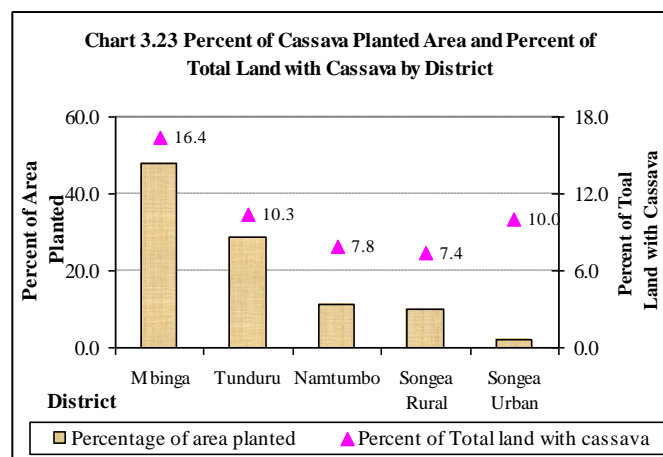
3.3.5.1 Cassava

The number of households growing cassava in the region was 104,917. This represents 50 percent of the total crop growing households in the region. The total production of cassava during the census year was 100,116 tonnes from a planted area of 56,863 hectares resulting in a yield of 1.8t/ha.

Compared to the 2002/03 agriculture sample census, the area planted with cassava dropped from 87,522 ha in 2002/03 to 56,863 ha in 2007/08 agricultural year (Chart 3.22).

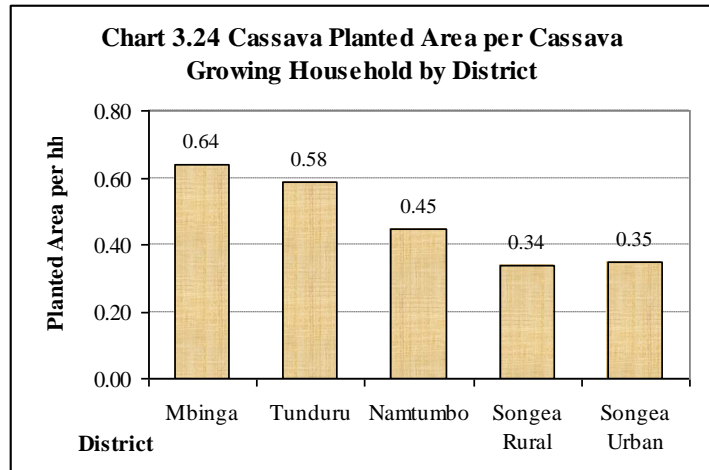


The area planted with cassava accounted for 19 percent of the total area planted with annual crops and vegetables in the census year. Mbinga district had the largest planted area of cassava (27,355 ha, 48.1% of the cassava planted area in the region), followed by Tunduru (16,315 ha, 28.7%), Namtumbo (6,457 ha, 11.4%), Songea Rural (5,645 ha, 9.9%) and Songea Urban (1,091 ha, 1.9%) (Map 3.15). However, the highest proportion of land planted with cassava, expressed as a percent of the total land area was in Mbinga



district (16.4%). This was followed by Tunduru (10.3%), Songea Urban (10.0%), Namtumbo (7.8%) and Songea Rural (7.4%) (Chart 3.23).

The average cassava planted area per cassava growing household was 0.54 hectare. However, there were small district variations. The area planted per cassava growing household was largest in Mbinga (0.64 ha). This was followed by Tunduru (0.58 ha), Namtumbo (0.45 ha), Songea Urban (0.35 ha) and Songea Rural (0.34 ha) (Chart 3.24 and Map 3.16).

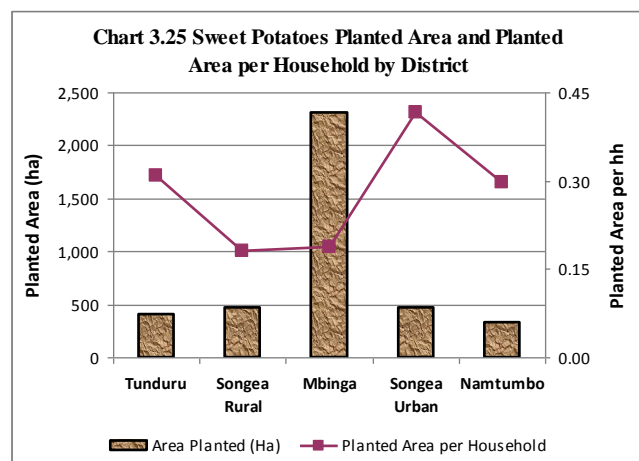


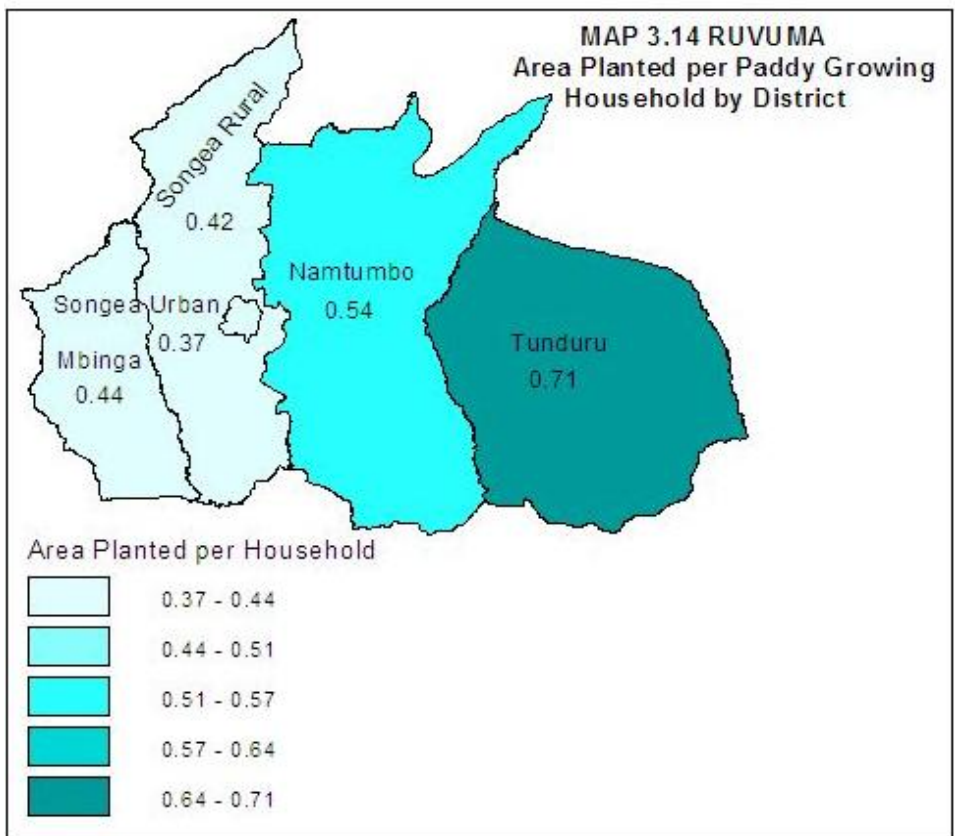
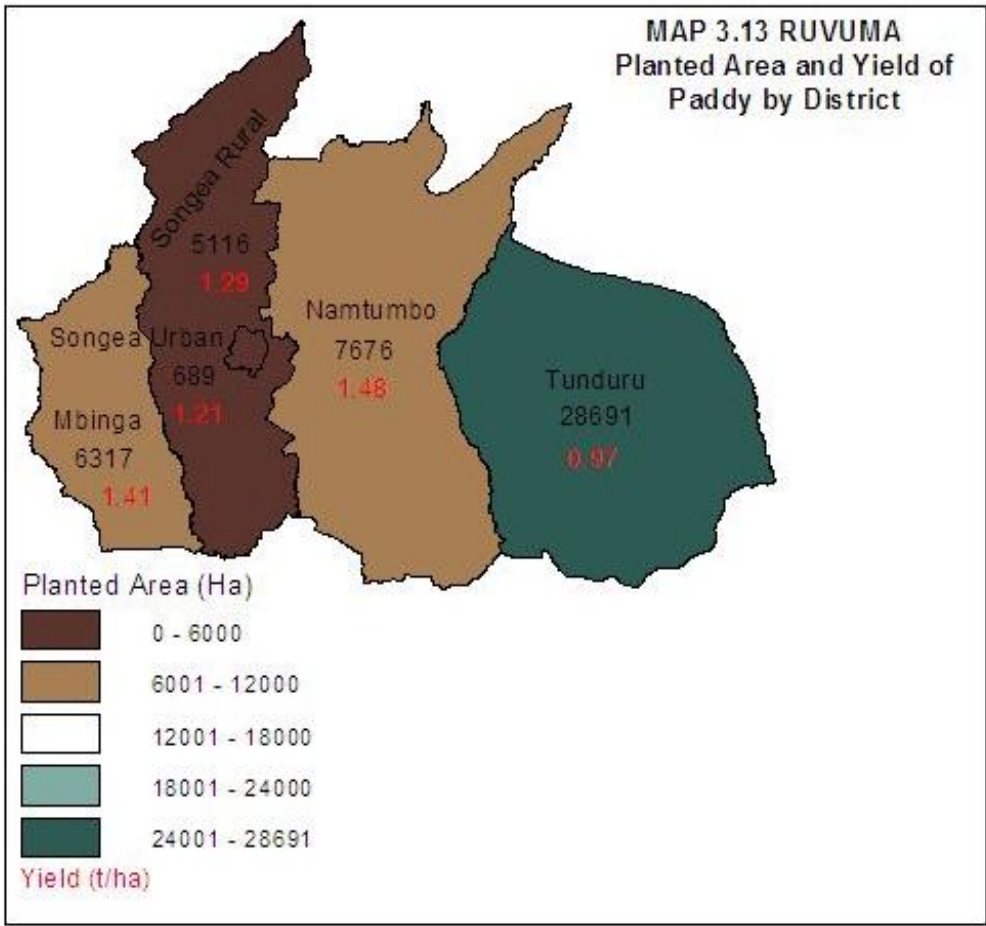
3.3.5.2 Sweet Potato

The number of households growing sweet potatoes in the region was 18,579. This represents 8.8 percent of the total crop growing households in the region. The total production of sweet potatoes during the census year was 7,488 tonnes from a planted area of 3,990 hectares resulting in a yield of 1.9 t/ha.

Mbinga district had the largest planted area of sweet potatoes (2,310 ha, 58% of the sweet potatoes planted area in the region), followed by Songea urban (469 ha, 12%), Songea Rural (468 ha, 12%), Tunduru (407 ha, 10%), and Namtumbo (336 ha, 8%). However, Songea Urban district recorded the highest sweet potato yield of 3.3 t/ha, followed by Songea Rural (2.5 t/ha), Mbinga (1.7 t/ha). Tunduru and Namtumbo accounted for a yield of 1.1 tonnes per hectare each.

The average area planted per sweet potatoes growing households was 0.21 hectares and there were small district variations. The area planted per sweet potatoes growing household was largest in Songea Urban (0.42 ha). This was followed by Tunduru (0.31 ha), Namtumbo (0.30 ha), Mbinga (0.19 ha) and Songea Rural (0.18ha) (Chart 3.25). Other root and tuber crops were of minor importance in terms of area planted compared to cassava and sweet potatoes.





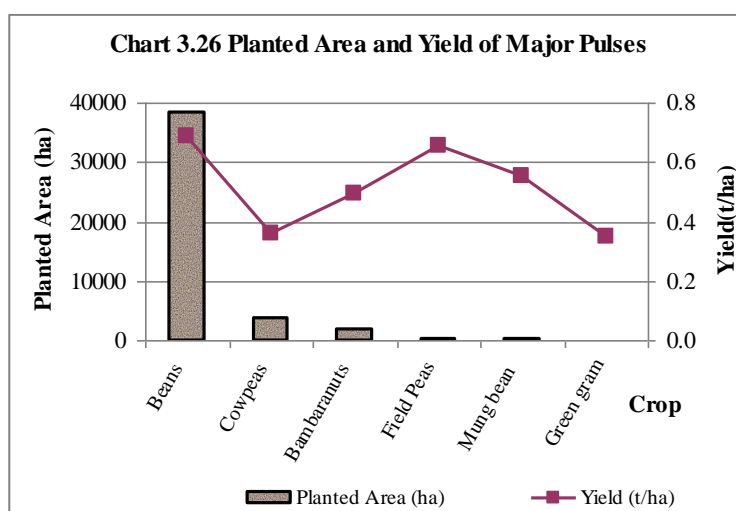
3.3.6 Pulse Crops Production

The total area planted with pulses was 44,437 hectares out of which 38,424 ha were planted with beans (86.4 percent of the total area planted with pulses), followed by cowpeas (3,628 ha, 8.2%), bambaranuts (1,881ha, 4.2%), field peas (252 ha, 0.6%), mung bean (136 ha, 0.3%) and green gram (116 ha, 0.3%). The average area planted per household with pulses was 0.38 hectare and the highest was for beans (0.46 ha). Pulses were not grown during the short rain season.

Table 3.6 Area, Production and Yield of Pulses by Season

Crop	Short Rain Season			Long Rain Season			Total		
	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Mung Bean	.	.	.	136	75	0.55	136	75	0.55
Beans	.	.	.	38,424	26,502	0.69	38,424	26,502	0.69
Cowpeas	.	.	.	3,628	1,305	0.36	3,628	1,305	0.36
Green gram	.	.	.	116	41	0.35	116	41	0.35
Bambaranuts	.	.	.	1,881	929	0.49	1,881	929	0.49
Field Peas	.	.	.	252	166	0.66	252	166	0.66
Total	.	.	.	44,437	29,017	0.65	44,437	29,017	0.65

The total production of pulses in 2007/08 was 29,017 an increase of 68 percent compared to production of 17,234 tonnes in 2002/03. Beans were the most cultivated crop producing 26,502 tonnes which accounted for 91.3 percent of the total pulse production. This was followed by cowpeas (1,305 tonnes, 4.5%), bambaranuts (929 tonnes, 3.2%), field peas (166 t, 0.6%), mung bean (75 tonnes, 0.3%) and green gram (41 tonnes, 0.1%). Beans had the highest yield of 0.69 t/ha. The yields of the rest of the pulses in tonnes per hectare were field peas 0.66 t/ha, mung bean (0.55 t/ha), bambaranuts (0.49 t/ha), cowpeas (0.36 t/ha) and greengram (0.35 t/ha) (Table 3.6 & Chart 2.26)

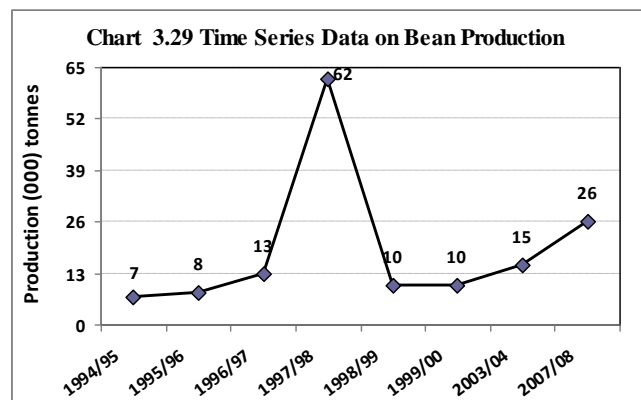
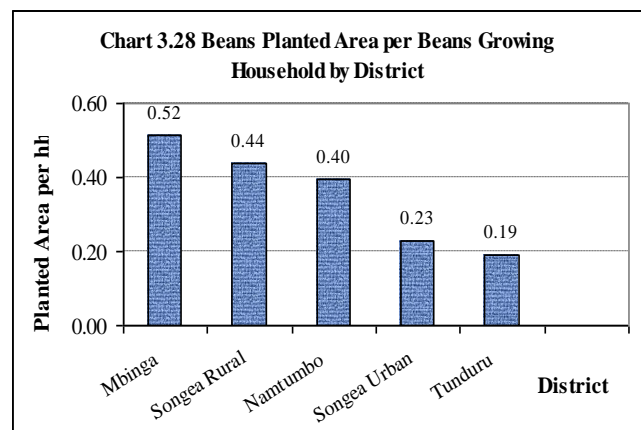
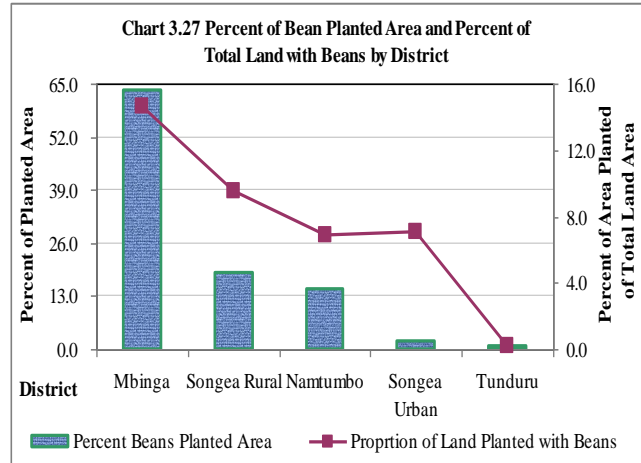


3.3.6.1 Beans

Beans dominated the production of pulse crops in the region. The number of households growing beans in Ruvuma region was 83,194. The total production of beans in the region was 26,502 tonnes from a planted area of 38,424 hectares resulting in a yield of 0.69 t/ha.

The largest area planted with beans in the region was in Mbinga district (24,405 ha, 63.5%). This was followed by Songea Rural (7,270 ha, 18.9%), and Namtumbo (5,656 ha, 14.7%). The area planted with beans in Songea urban and Tunduru was small being, 766 and 327 ha respectively (Chart 3.27 & Map 3.17). Mbinga also exhibited the largest area planted with beans per household (0.52 ha) and the lowest was in Tunduru district (0.19 ha). The average area planted per household in the region was 0.46 ha (Chart 3.28, Map 3.18).

In Ruvuma region, bean production over the period 1995 to 2003 was about 10,000 tonnes except for the year 1998 where the production was highest at 62,267 tonnes. The yield of beans remained fairly constant the previous 8 years and the quantity produced also remained generally constant. Between 2003 and 2008 there was a continuation of positive trend and production increased to 296,502 tonnes representing a 73 percent increase over five years period (Chart 3.29). The area planted with beans increased slightly by about 11 percent from 34,237 ha in 2003 to 38,424 ha in 2008. Over the five years period 2003 to 2008 the yield of beans increased from 0.4 t/ha to 0.7 t/ha.



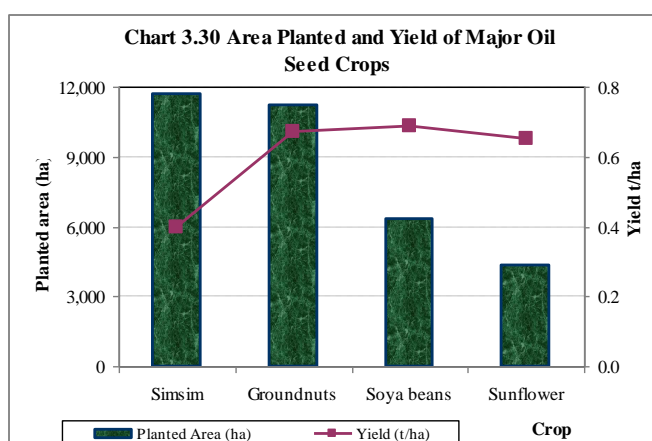
3.3.7 Oil Seed Production

The total production of oil seed crops was 19,366 tonnes planted on an area of 33,591 hectares. Oil seeds and oil nuts were grown by 84,651 households giving an average of 0.4 ha per household.

Table 3.7 Area, Quantity Harvested and Yield of Oil Seed Crops by Season

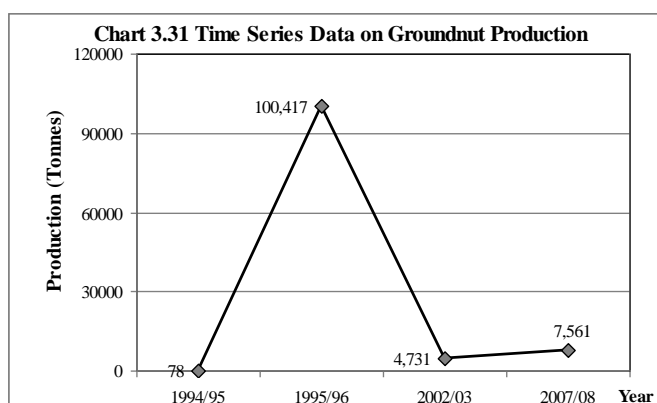
Crop	SHORT RAINY SEASON			LONG RAINY SEASON			Total		
	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Sunflower	.	.	.	4,367	2,841	0.7	4,367	2,841	0.7
Simsim	.	.	.	11,718	4,652	0.4	11,718	4,652	0.4
Groundnut	.	.	.	11,232	7,561	0.7	11,232	7,561	0.7
Soya Beans	71	0	0.0	6,274	4,311	0.7	6,345	4,311	0.7
Castor Fung	.	.	.	33	0	0.0	33	0	0.0
Total	71	0	0.0	33,624	19,366	0.6	33,695	19,366	0.6

Simsim was the most important oil seed crop with 11,718 ha (35% of the total area planted with oil seeds), followed by groundnuts (11,232 ha, 33%), soya beans (6,345 ha, 19%) and sunflower (4,367 ha, 13%). However, the yield of groundnuts, soya beans and sunflower was higher compared to that of simsim. In terms of production, groundnuts had a highest production of 7,561 tonnes and accounted for 39 percent of the total production of oil seeds, followed by simsim (24%), soya beans (22%) and sunflower (15%), (Table 3.7 & Chart 3.30).



3.3.7.1 Groundnuts

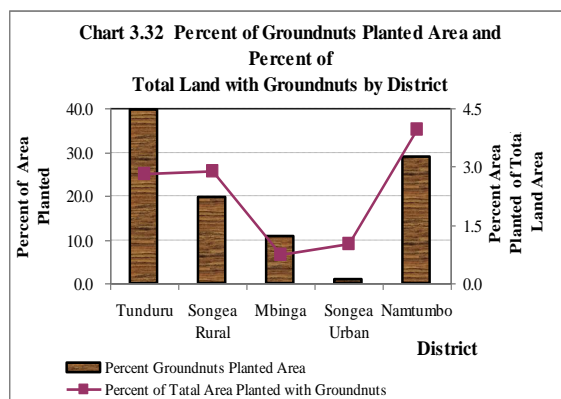
The number of households growing groundnuts in Ruvuma region was 34,829. The total production of groundnuts in the region was 7,561 tonnes from a planted area of 11,232 hectares resulting in a yield of 0.7 tonnes/hactere.



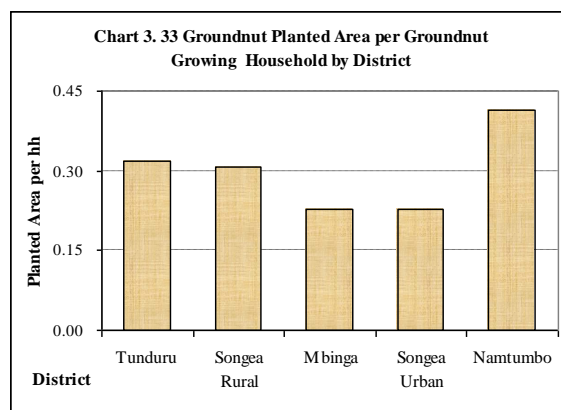
There was a sharp increase in production of groundnuts over the period 1995 to 1996, from 78 tonnes in 1994/95 to 100,417 tonnes in 1995/96, and then a sharp decrease to 4,731 tonnes in

2002/03. From 2003 to 2008 there was a positive trend in groundnut production and yield increased by about 1.5 times from 4,731 tonnes to 7,561 tonnes. The area planted increased from 9,561 ha to 11,232 ha and yield from 0.5 t/ha to 0.7 t/ha (Chart 3.31)

Tunduru had the largest area planted with groundnuts (4,444 ha, 40% of the total area planted with groundnuts in the region). It was followed by Namtumbo (3,263 ha, 29%), Songea Rural (2,198 ha, 20%), Mbinga (1,219 ha, 11%) and Songea Urban (108 ha, 1%). The highest proportion of land with groundnuts was found in Namtumbo (4.0%), followed by Songea Rural (2.9%), Tunduru (2.8%), Songea Urban (1.0%) and Mbinga (0.7%) (Chart 2.32, Map 3.19).

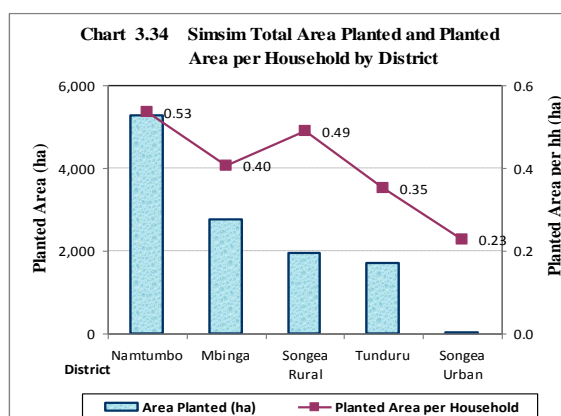


The largest area planted per groundnut growing household was found in Namtumbo (0.41ha) and the smallest was in Mbinga and Songea Urban (0.23 each) (Chart 3.33 & Map 3.20).

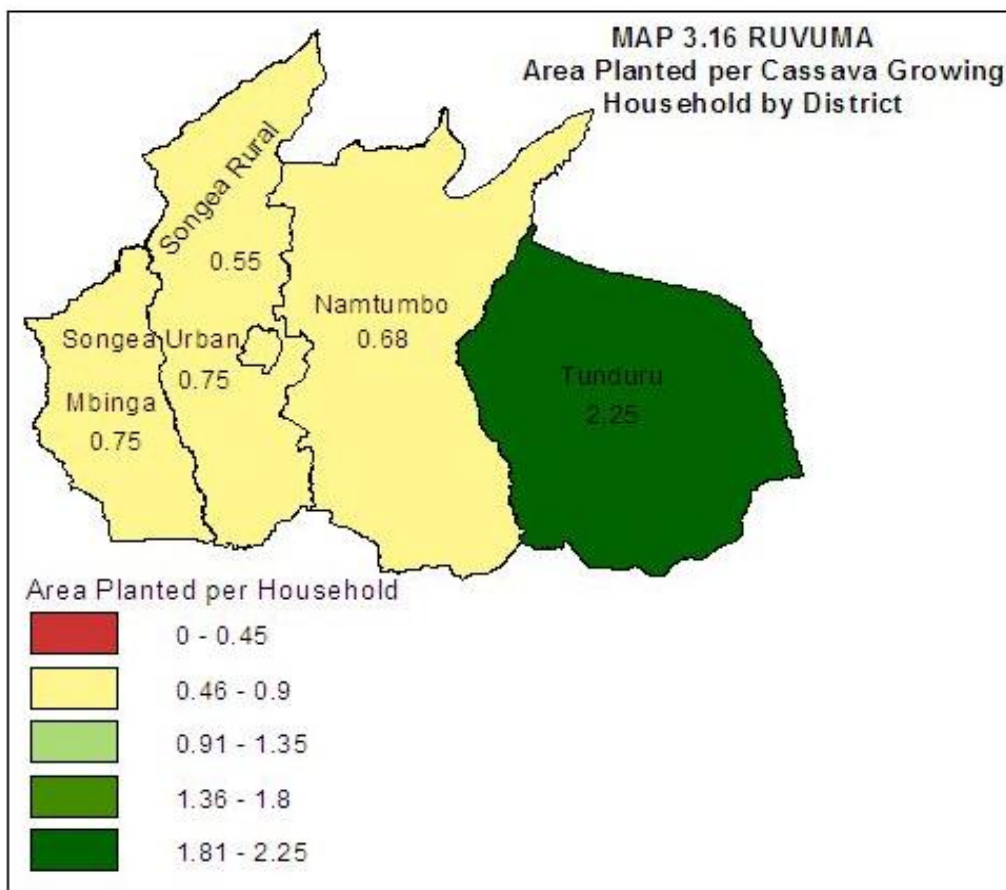
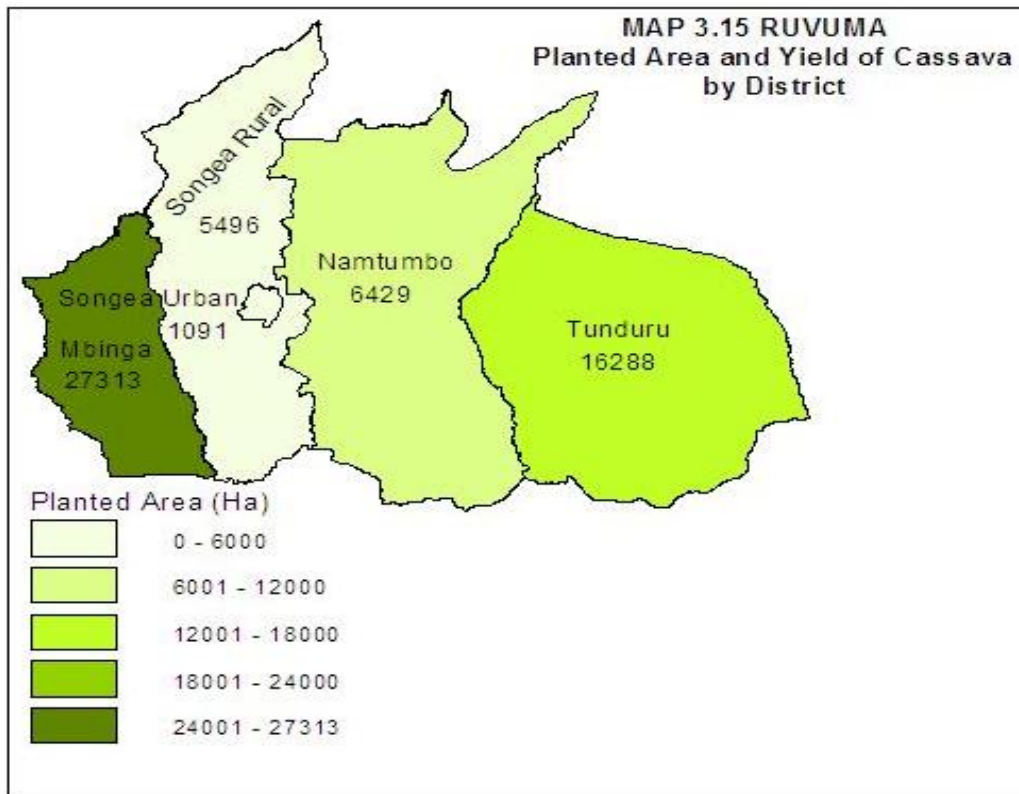


3.3.7.2 Simsim

A total of 11,718 ha were planted with simsim in 2007/08 agriculture year yielding 4,652 tonnes. The total planted area increased from 6,279 ha in 2003 to 11,718 ha in 2008. However, despite the increase in area planted, production has decreased from 7,751 tonnes 2002/03 to 4,651 in 2007/08. Namtumbo district had the largest area planted with simsim (5,280 ha, 45.1% of total area with simsim in the region), followed by Mbinga (2,755 ha, 23.5%), Songea Rural (1,954 ha, 16.2%) and Tunduru (1,709 ha, 14.5%). Small area was planted with simsim in Songea urban (20 ha, 0.2%) (Chart 3.34).



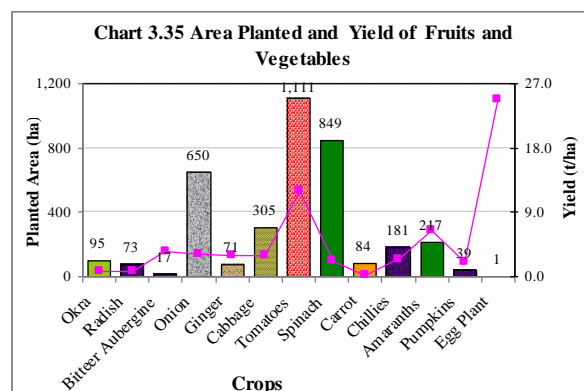
On average each household planted 0.46 ha with Namtumbo district having the largest planted area per household (0.53 ha). The average yield per hectare in the region was about 0.4 tonnes, the highest being in Songea Urban district (0.65 t/ha). The production of simsim in Namtumbo district was about 50 percent of the total production in Ruvuma district.



3.3.8 Fruits and Vegetables

The collection of fruit and vegetables production data was difficult due to the small quantities produced per household. Most of the data presented here gives the production of smallholders who grew these crops as cash crops and not merely for household consumption. Most fruit production is from permanent crops. The dry season is relatively not important for fruit and vegetables production.

The total production of fruits and vegetables was 20,525 tonnes. The most cultivated fruit and vegetable crop was tomato grown on an area of 1,111 ha. It was followed by spinach (849 ha), onion (650 ha), cabbage (305), amaranths (217 ha) and chillies (181 ha). Other vegetables were grown in small areas (Chart 3.35). Tomatoes accounted for 65 percent of the total vegetable production, while onion and spinach accounted for 10 and 9 percents respectively.

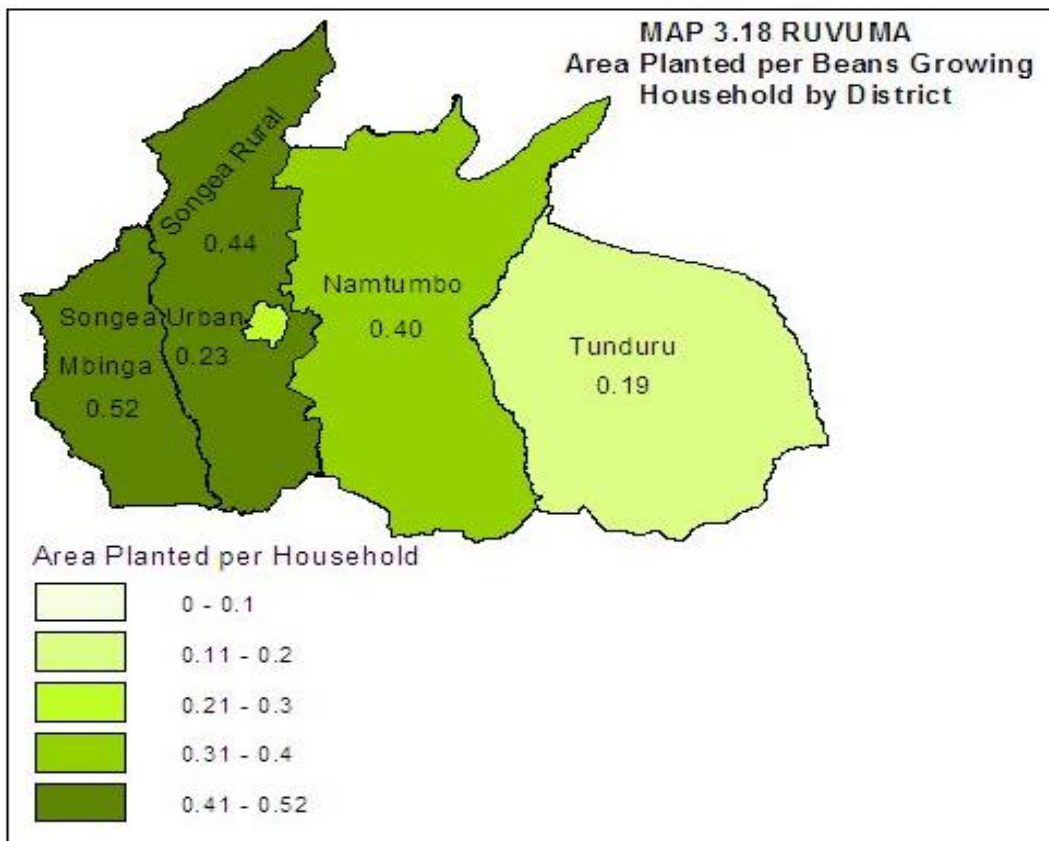
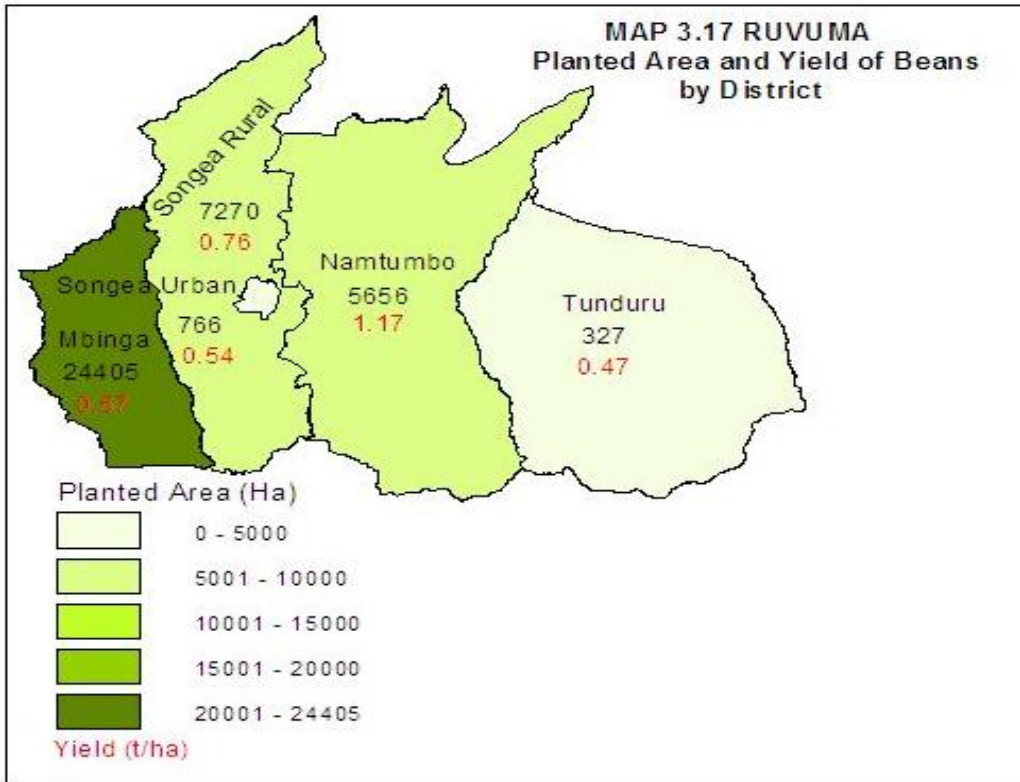


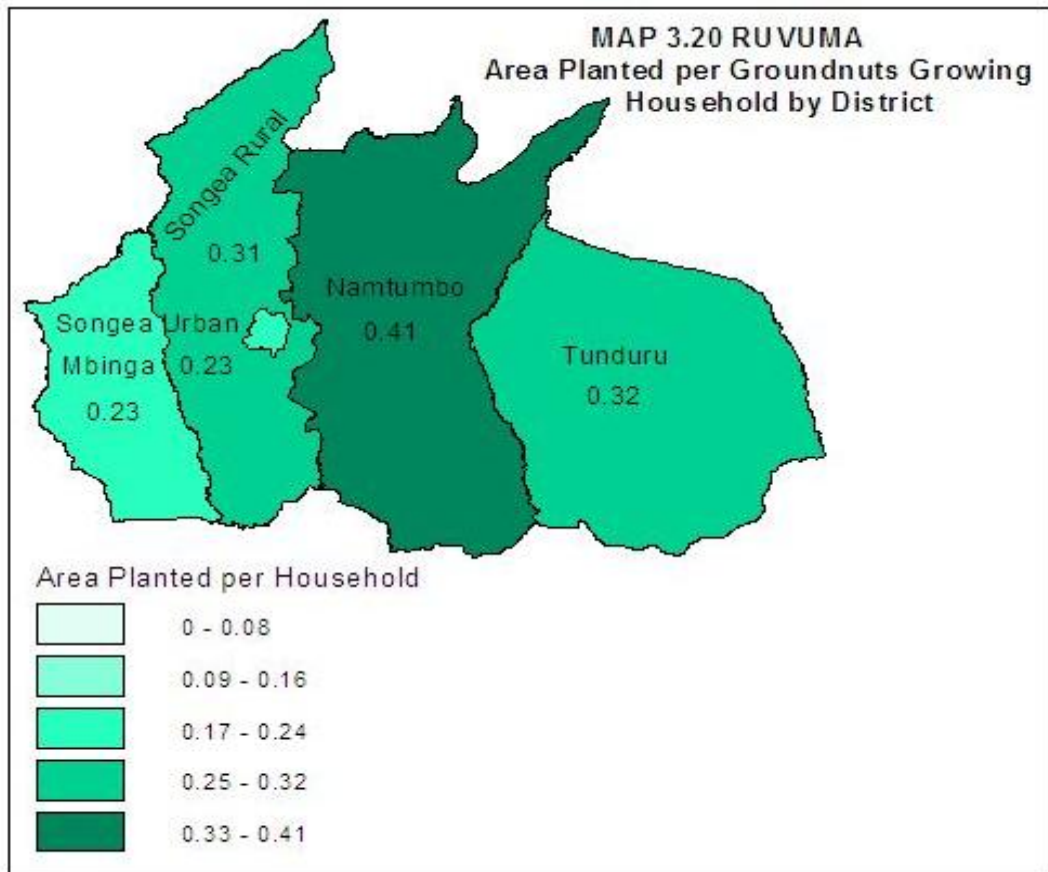
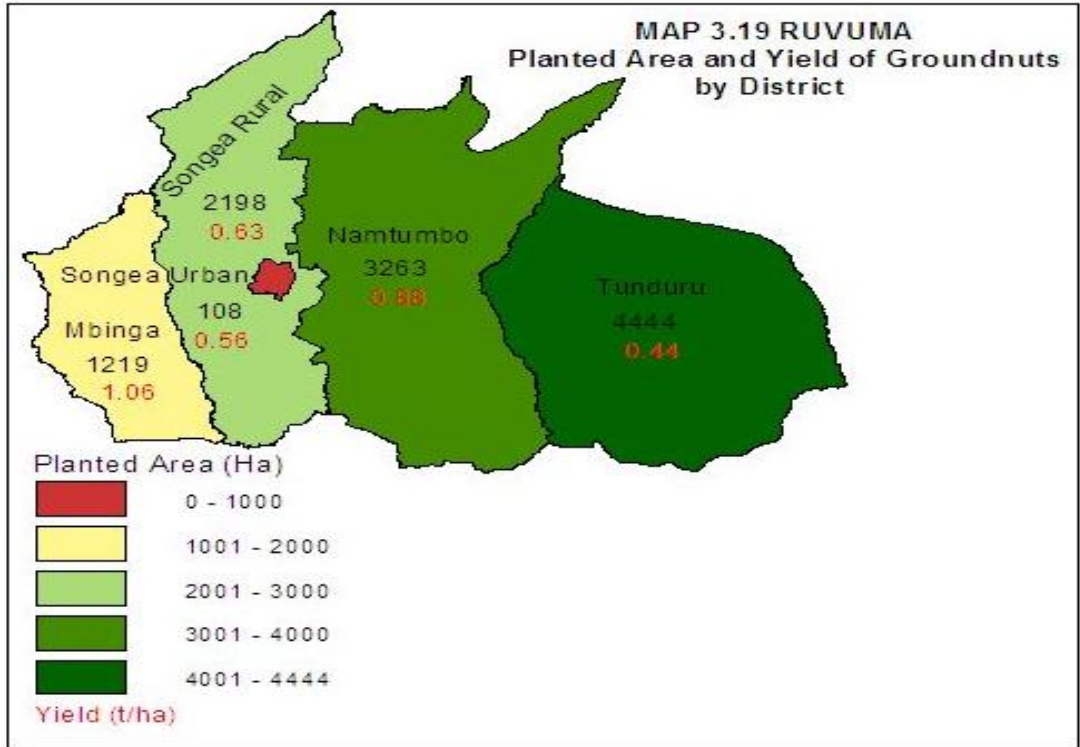
Most household grew tomatoes, spinach, onion, cabbage and amaranths. Nevertheless tomatoes had higher production (13,372 tonnes) compared to other vegetables. It was followed by onion (2,012 tonnes), spinach (1,884 tonnes) and amaranths (1,412 tonnes). Production from other vegetables was low.

Despite eggplant being cultivated on a small area, it had the highest yield per hectare (24.7 tonnes) compared to tomato (12 tonnes). Lowest yield per hectare was from carrots, pumpkins and spinach (Table 3.8, Chart 3.35).

Table 3.8 Area, Quantity Harvested and Yield of Fruits and Vegetables

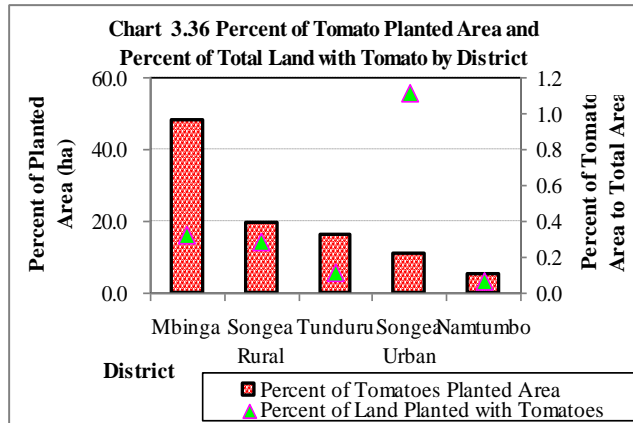
Crop	SHORT RAINY SEASON			LONG RAINY SEASON			TOTAL		
	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Okra	0	0	0	95	76	0.8	95	76	0.8
Radish	0	0	0	73	58	0.8	73	58	0.8
Bitter	0	0	0	17	62	3.6	17	62	3.6
Aubergine	0	0	0	17	62	3.6	17	62	3.6
Onion	0	0	0	650	2,012	3.1	650	2,012	3.1
Ginger	0	0	0	71	205	2.9	71	205	2.9
Cabbage	0	0	0	305	904	3	305	904	3
Tomatoes	0	0	0	1,111	13,372	12	1,111	13,372	12
Spinach	0	0	0	849	1,884	2.2	849	1,884	2.2
Carrot	0	0	0	84	10	0.1	84	10	0.1
Chillies	0	0	0	181	430	2.4	181	430	2.4
Amaranths	0	0	0	217	1,412	6.5	217	1,412	6.5
Pumpkins	0	0	0	39	76	2	39	76	2
Egg Plant	0	0	0	1	24	24.7	1	24	24.7
TOTAL	0	0	0	3,692	20,525	5.6	3,692	20,525	5.6





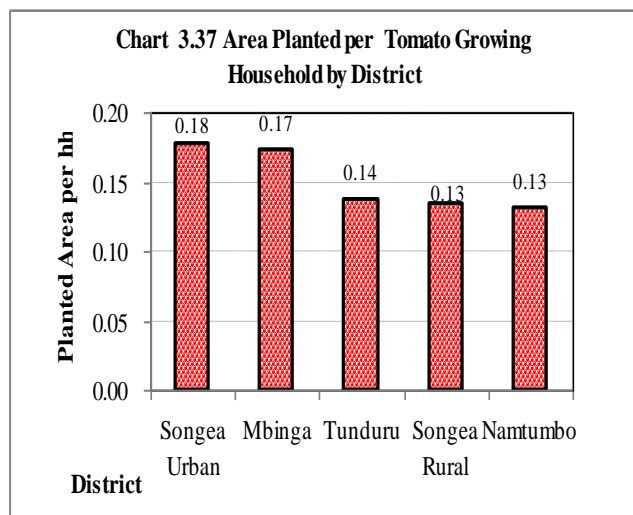
3.3.8.1 Tomatoes

The number of households growing tomatoes in the region was 7,163 during the long rain season and no household grew tomato during short rain season. This represented 3.4 percent of the total crop growing households during the long rain season.



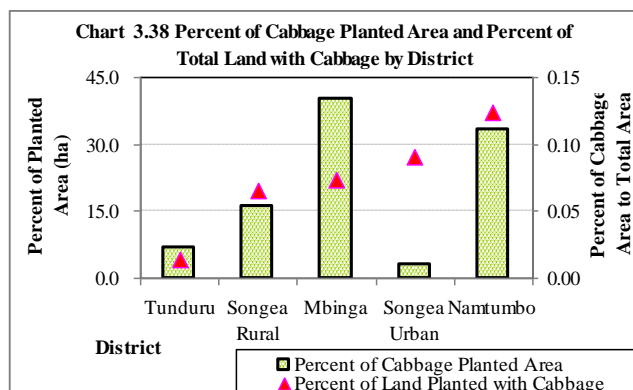
Mbinga district had the largest planted area of tomatoes (48% of the total area planted with tomatoes in the region), followed by Songea Rural (20%), Tunduru (16%), Songea Urban (11%) and Namtumbo (5%) (Chart 3.36, Map 25).

The highest proportion of land with tomatoes was found in Songea Urban (1.11 ha) and Mbinga (0.32 ha). The largest area planted per tomato growing household was found in Songea Urban (0.18 ha) followed by Mbinga (0.17 ha), Tunduru (0.14 ha), Songea Rural (0.13 ha) and Namtumbo (0.13 ha) (Chart 3.37). The total area planted with tomatoes accounted for 0.4 percent of the total area planted with annual crops and vegetables.



3.3.8.2 Cabbage

The number of households growing cabbages in the region decreased from 10,900 in 2003 to 2,937 in 2008. Total production was 904 tonnes from an area of 305 hectares giving an average production of 3 tonnes per hectare.



Mbinga district had the largest planted area of cabbage (122, ha, 40% of the total area planted with cabbage in the region), followed by Namtumbo (102 ha, 34%), Songea Rural (49 ha, 16%),

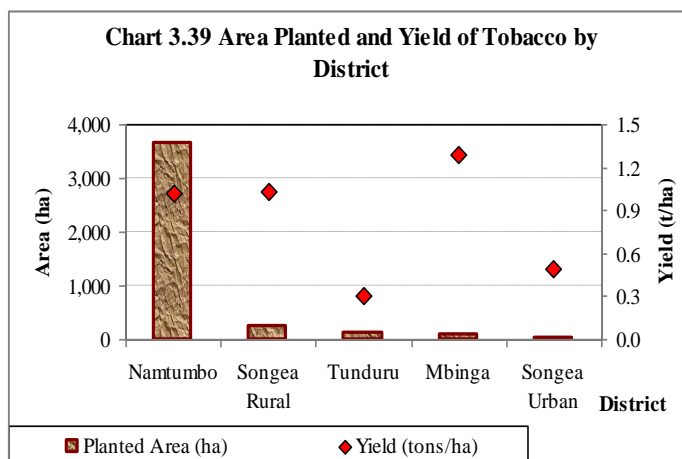
Tunduru (21 ha, 7%) and Songea Urban (10 ha, 3%) (Chart 3.38). The total area planted with cabbages accounted for 0.1 percent of the total area planted with annual crops and vegetables in the region.

3.3.9 Other Annual Crop Production

Most of the other annual crops are cash crops. An area of 4,199 ha was planted with other annual crops and the largest area (99.6%) was under tobacco.

3.3.9.1 Tobacco

About 4200 tonnes of tobacco was produced in 2008 compared to 4,371 tons in 2003. Though yield has not improved significantly, the area under tobacco decreased from 7,169 ha to the current value of 4,199 ha (a decrease of about 70%).

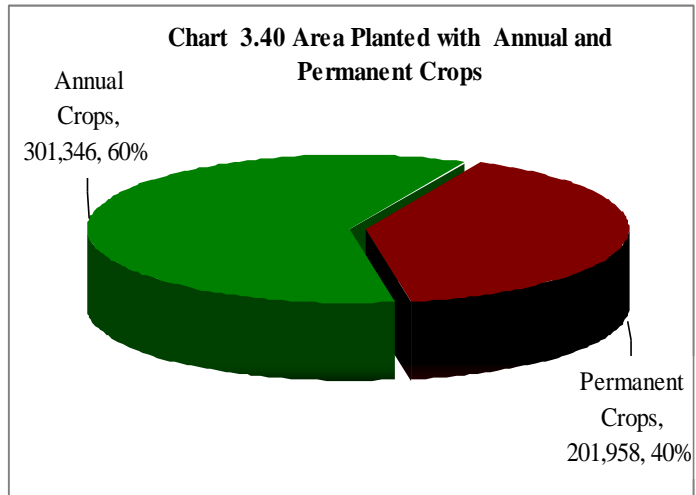


Namtumbo had the largest planted area (88 % of total area planted with tobacco in the region), followed by Songea Rural (6%). Other districts have small areas planted with tobacco. Mbinga had the highest yield of 1.3 tonnes per hectare and the least yield was 0.3 tonnes per hectare in Tunduru district (Chart 3.39, Map 3.22 & 3.23). The largest area planted per household was in Tunduru and Songea Rural (0.8 ha and 0.7 ha respectively).

3.4 Permanent Crops

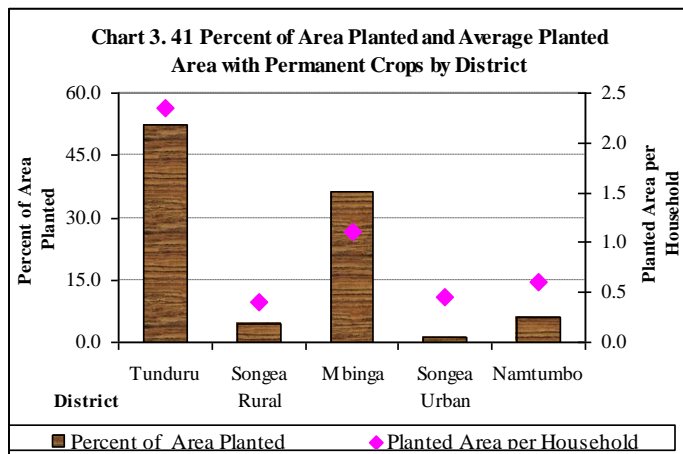
Permanent crops (sometimes referred to as perennial crops) are crops that normally take over a year to mature and once matured can be harvested for a number of years. For most crops, it is easy to determine if they are annual or permanent. However, for crops like cassava and bananas the distinction is not so clear. Cassava has varieties that mature within a year and produce only one harvest, whilst other varieties survive for more than one year and produces several harvests. In this census, cassava was treated as an annual crop. Conversely, bananas normally take less than a year to mature, survive for more than one year and thus treated as a permanent crop. In this report, the results are presented for the most important permanent crops in terms of production, yield and area planted.

The area of smallholders planted with permanent crops was 303,646 hectares (60% of the total area planted with annual and permanent crops in the region). However, the area planted with annual crops was not the actual physical land area as it included the area of crops planted more than once on the same land, whilst for the planted area for permanent crops was the same as the physical planted land area. So, the percentage of physical area planted with permanent crops could be higher than that indicated in Chart 3.40.



The most important permanent crop in Ruvuma region was cashewnut which had a planted area of 74,368 ha, (41% of the planted area of all permanent crops) followed by pigeon peas (32,941 ha, 18.3%), Coffee (30,679 ha, 17%) and banana (7,282 ha, 4%). The remaining permanent crops accounted for 19 percent of the total area planted with permanent crops.

Tunduru district had the largest area under smallholder permanent crops (105,869 ha, 52.4% of the total area with permanent crops). This was followed by Mbinga (73,250 ha, 36.3%), Namtumbo (11,850 ha, 5.9%), Songea rural (8,903 ha, 4.4%) and Songea Urban (2,086 ha, 1%), (Chart 3.41). However, Tunduru had the largest area per permanent crop growing household (2.4 ha) followed by Mbinga (1.1 ha), Namtumbo (0.6 ha), Songea Urban (0.5 ha) and Songea Rural (0.4 ha).

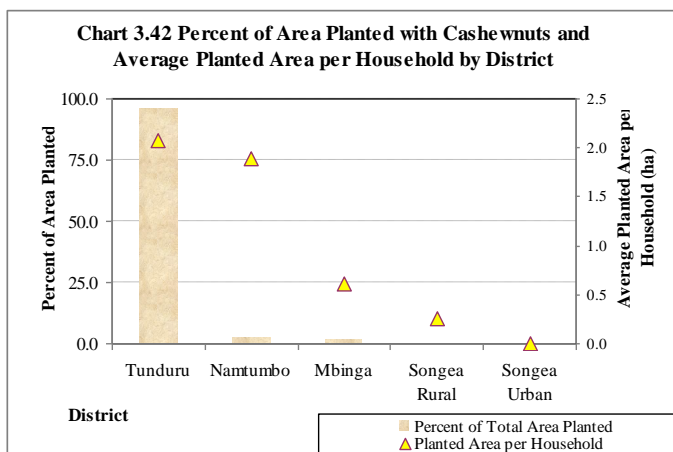


3.4.1 Cashewnut

The total production of cashewnut by smallholders was 7,749 tonnes. Cashewnut production has declined from 9,278 tonnes in 2003 to 7,749 tonnes in 2008, equivalent to 16 percent decline. In terms of area planted, cashewnut was the most important permanent crop grown by smallholders in the region. It was grown by 37,626 households (17.9% of the total crop growing households). The

average area planted with cashewnut per cashew nut growing household was 1.98 ha and the average yield obtained by smallholders was 145 kg/ha from a harvest area of 53,612 hectares.

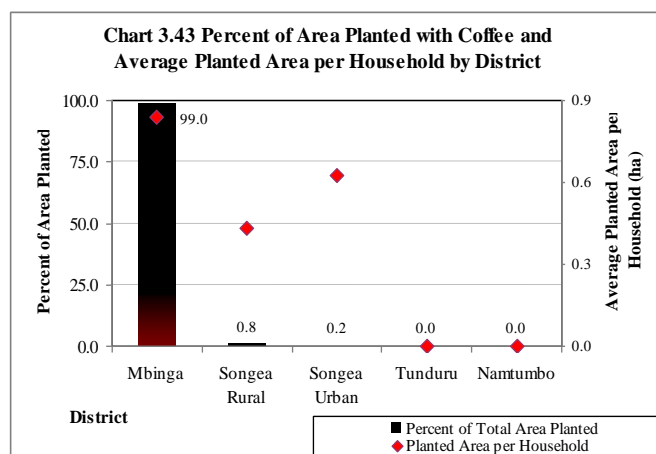
Tunduru had the largest area of cashewnut in the region (71,594 ha, 96.3% of the total area planted with cashewnut), however small areas planted with cashewnut was in Namtumbo, Mbinga, Songea rural and Songea urban. The average area planted with cashewnut per cashewnut growing household was highest in Tunduru (2.1 ha) followed by Namtumbo (1.9 ha), Songea Rural (0.3 ha) and Mbinga (0.6 ha), (Chart 3.42, Map 3.24).



3.4.2 Coffee

The total production of coffee by smallholders was almost doubled from 12,388 tonnes in 2003 to 22,640 tonnes in 2008. In terms of area planted, coffee was the second most important permanent crop (30,734 ha) grown by smallholders in the region. It was grown by 37,005 households (17% of the total crop growing households). The average area planted with coffee per household was relatively small at around 0.83 ha per coffee growing household and the average yield obtained by smallholders was 1.2 t/ha from a harvested area of 18,354 hectares.

Only three districts were reported to grow coffee in Ruvuma region in 2007/08 which is Mbinga, Songea Rural and Songea Urban. However, out of 30,764 ha, 99 % were in Mbinga and the remaining 0.8 and 0.2 percents were in Songea Rural and Songea Urban respectively. The average area planted with coffee per coffee planting household was highest in Mbinga (0.8 ha) and lowest in Songea Rural, (Chart 3.43, Map 3.26 & Map 3.27).

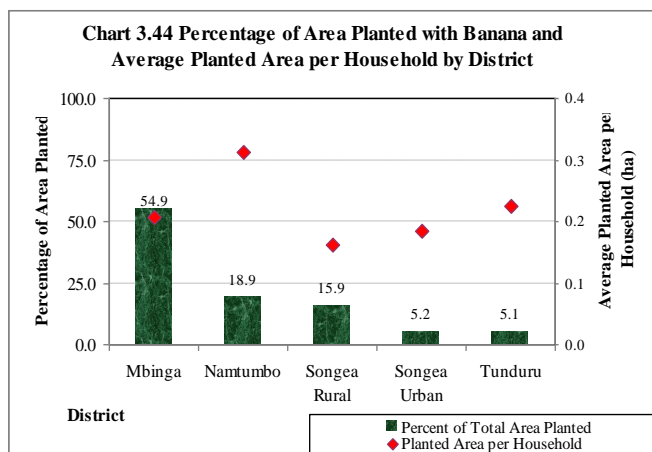


3.4.3 Banana

In terms of area planted, banana was the fourth most important permanent crop grown by smallholders in Ruvuma region. It was grown by 38,692 agricultural households (18.4% of the total

crop growing households). The total area under banana was 8,119 hectares; however the quantity of banana harvested was 37,523 tonnes from a harvest area of 4,216 hectares.

Mbinga had the largest planted area of banana in the region with 4,461 ha (54.9% of the total area with bananas in the region), followed by Namtumbo (1,531 ha, 18.9%) and Songea Rural (1,289 ha, 15.9%). Songea urban and Tunduru had the smallest area planted with banana (422 and 416 ha respectively), (Map 3.28 & Map 3.29).



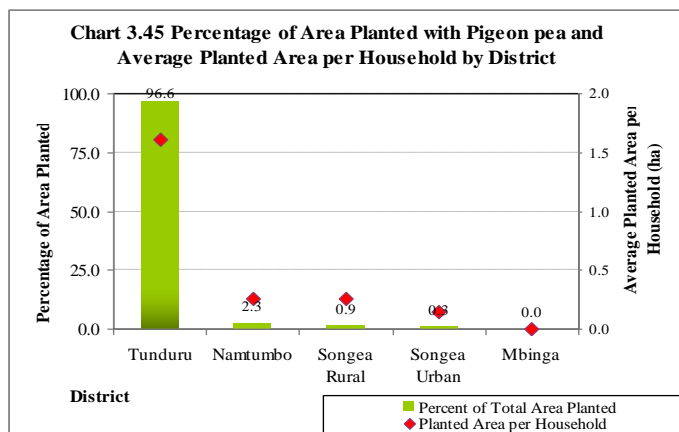
The average area planted with banana per banana growing household in the region was 0.21ha, with Namtumbo district having the highest (0.31ha) area planted per household. This was followed by Tunduru (0.23 ha), Mbinga (0.21 ha), Songea Urban (0.18 ha) and Songea Rural (0.16 ha) (Chart 3.44). The area under banana has slightly increased from 7,751ha in 2003 to 8,119 ha in 2008.

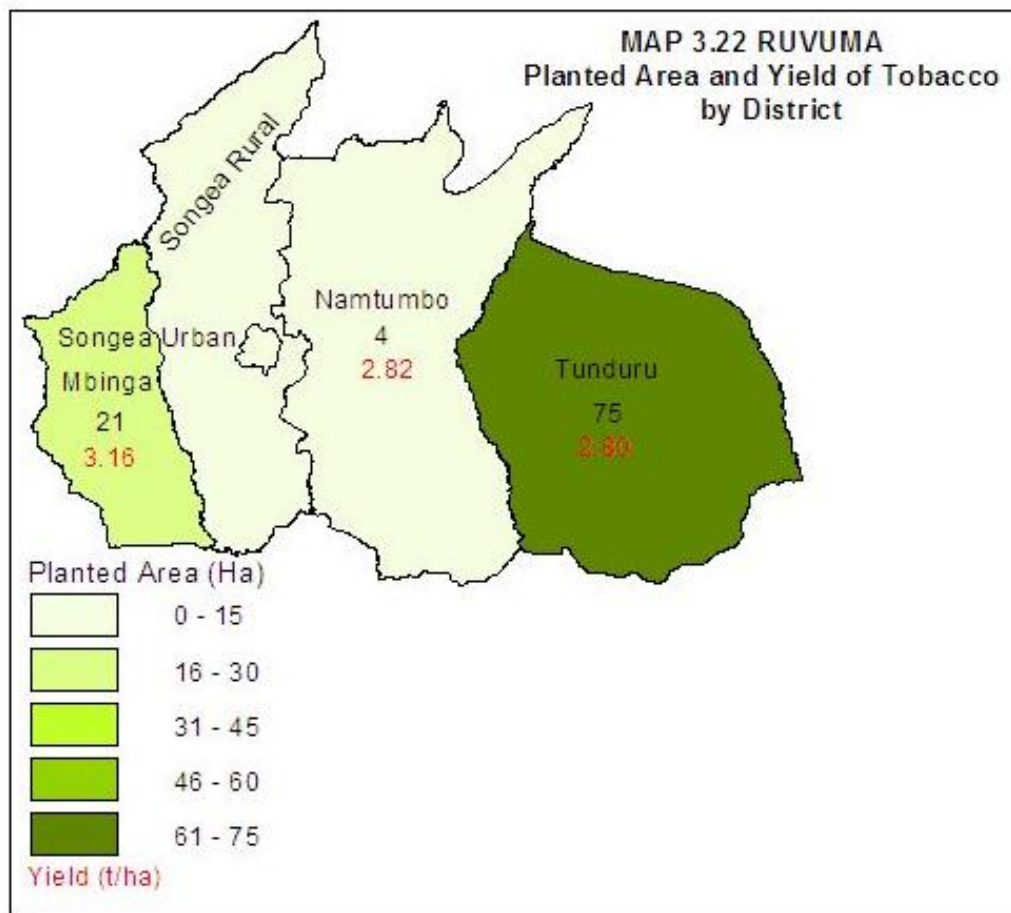
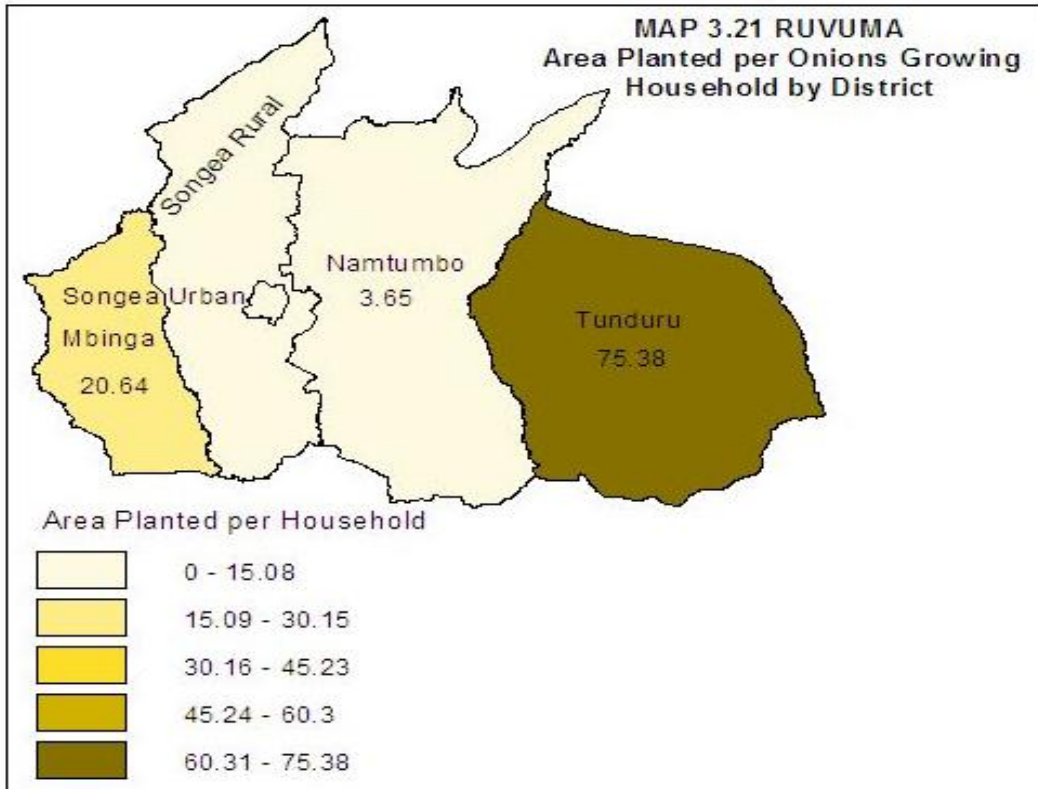
3.4.4 Pigeon Peas

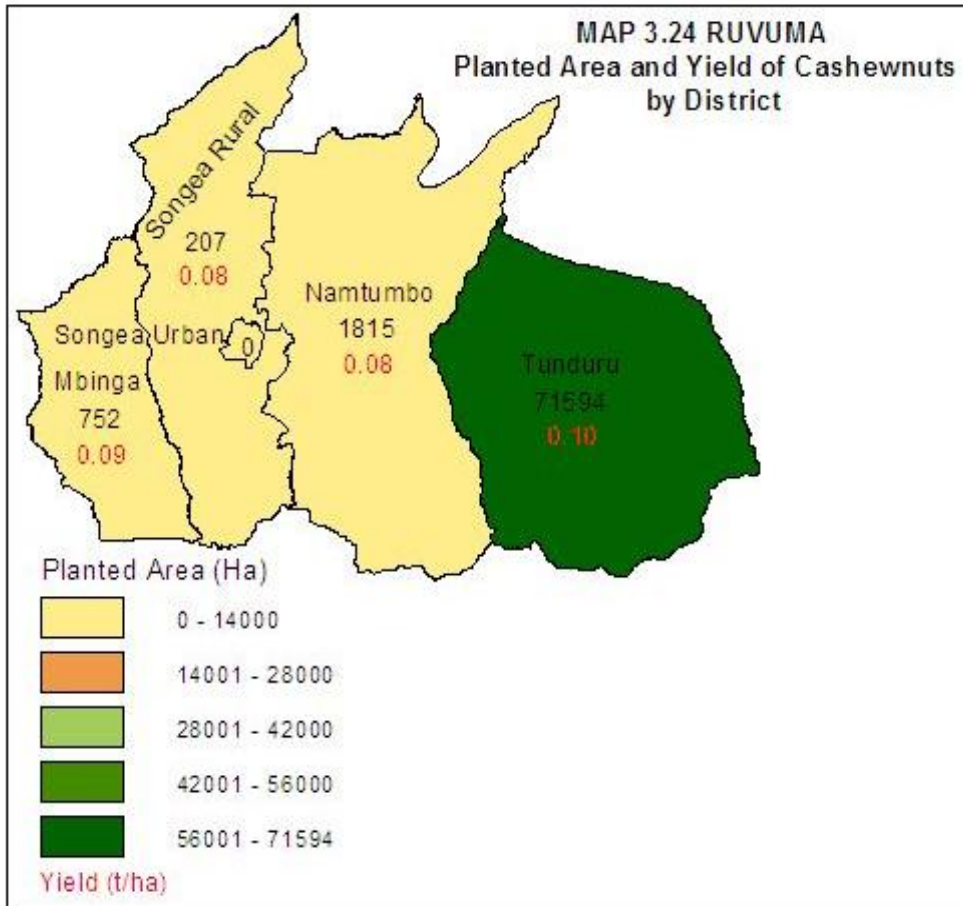
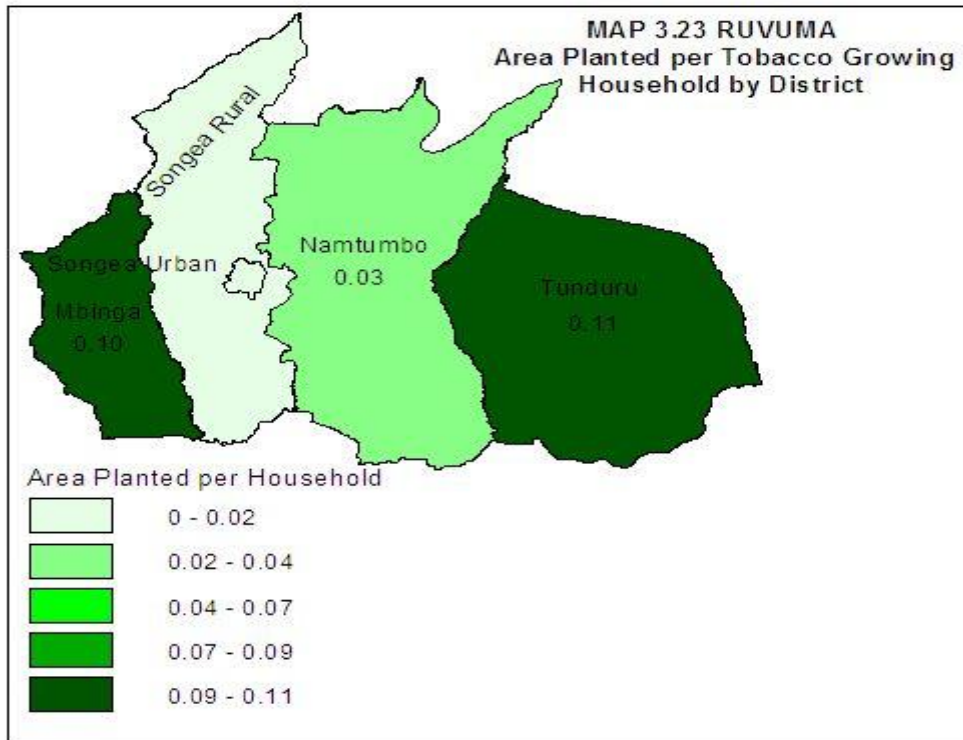
The total production of pigeon peas by smallholders was 1,176 tonnes. In terms of area planted, pigeon peas were the third most important permanent crop (16,685 ha) grown by smallholders in the region. It was grown by 12,385 households (6% of the total crop growing households).

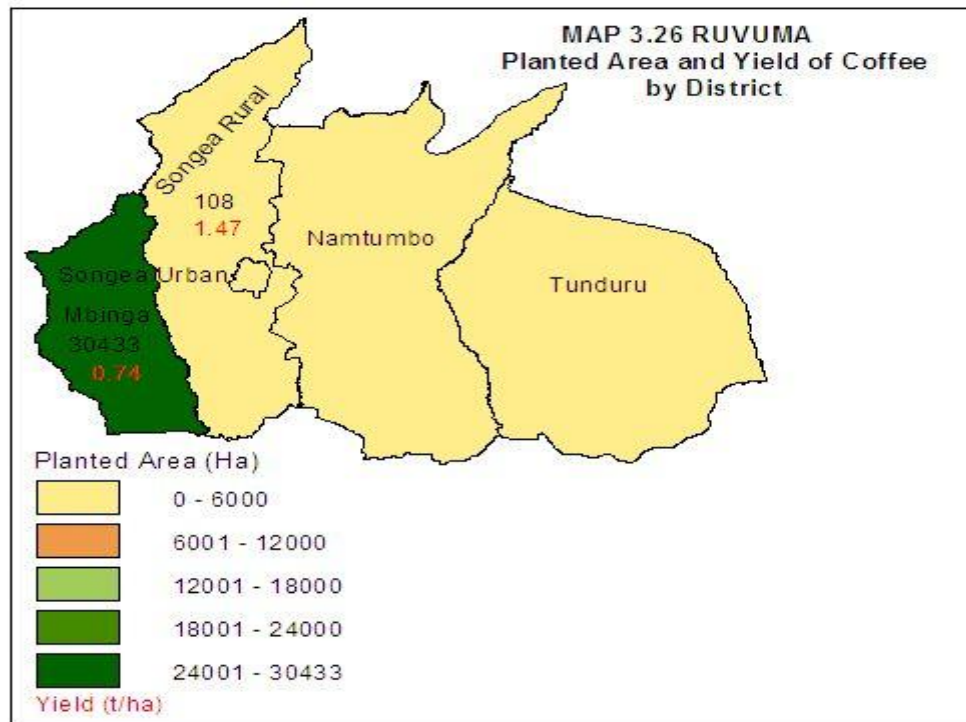
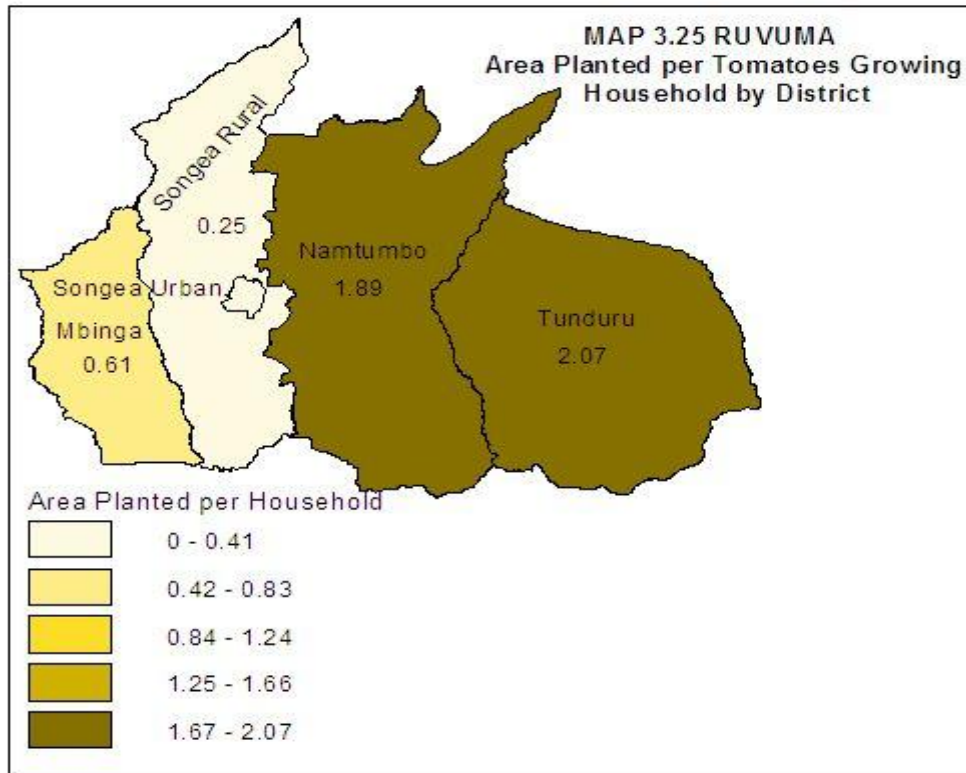
The average area planted with pigeon peas per household was 1.4 ha per pigeon peas growing household and the average yield obtained by smallholders was 304 kg /ha from a harvested area of 3,858 hectares.

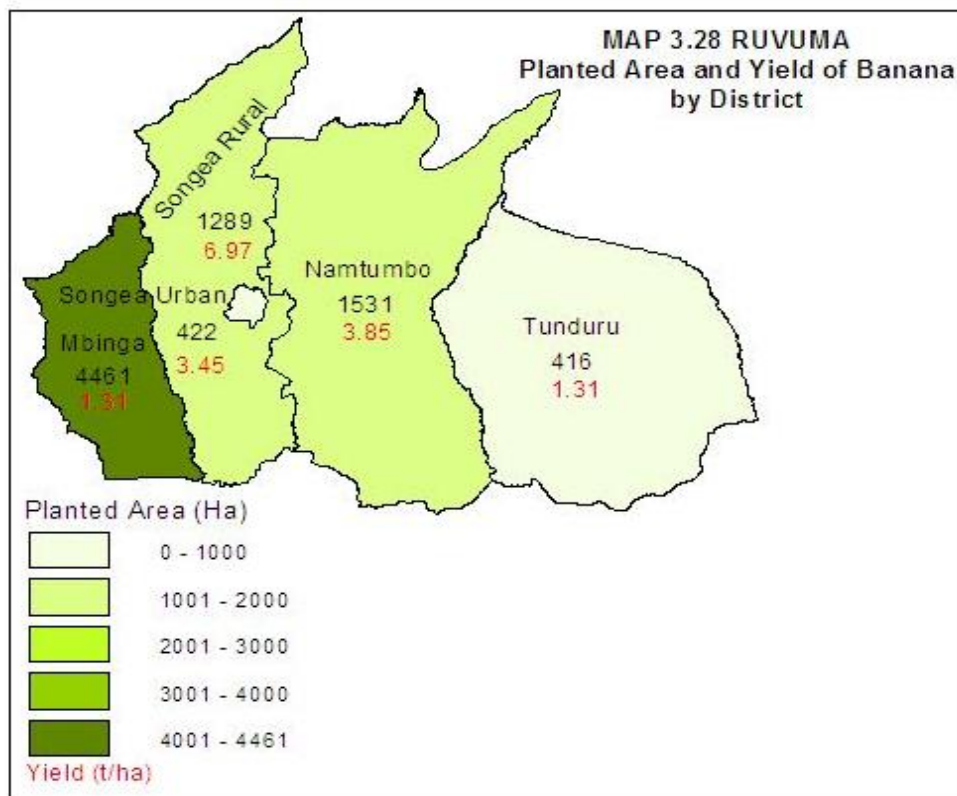
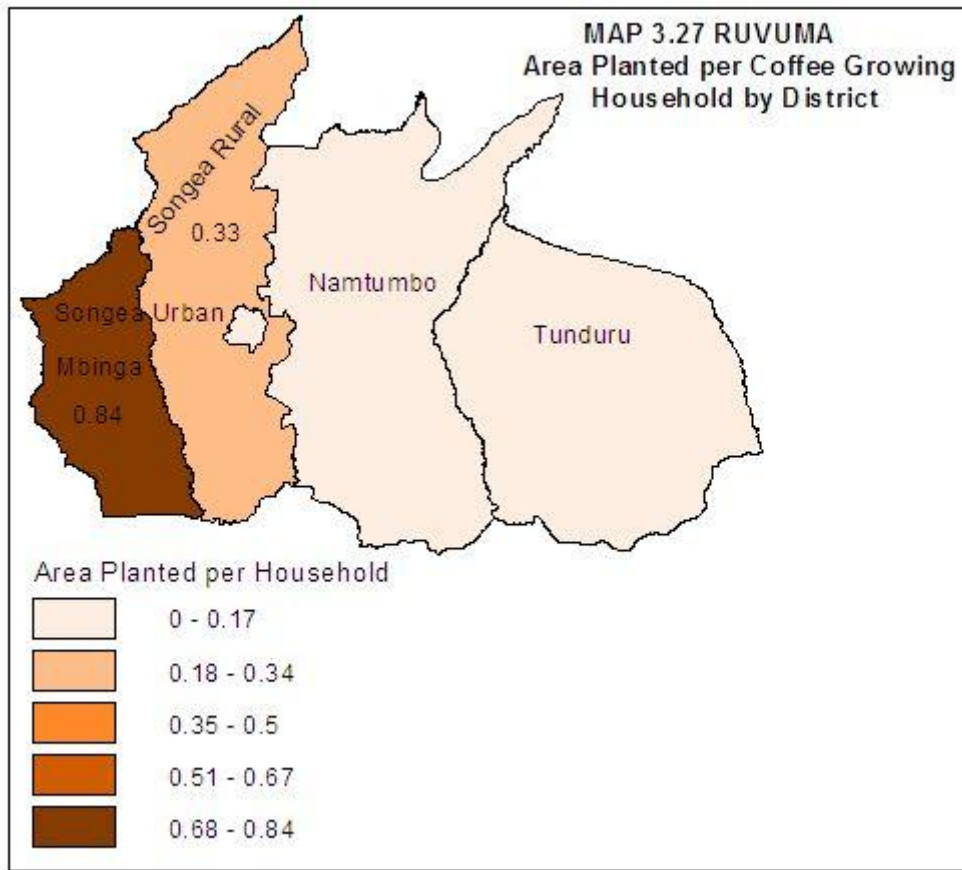
Tunduru had the largest area of pigeon peas in the region (16,110 ha, 96.5%) followed by Namtumbo (382 ha, 2.3%), Songea Rural (570 ha, 0.9%) and Songea Urban (47 ha, 0.3 %). Pigeon peas were not grown in Mbinga district. However, the average area planted per pigeon peas growing household was highest in Tunduru (1.61 ha), followed by Namtumbo and Songea Rural each with 0.26 hectare. The least was Songea Urban (0.14ha), (Chart 3.45, Map 3.30 & Map 3.31).

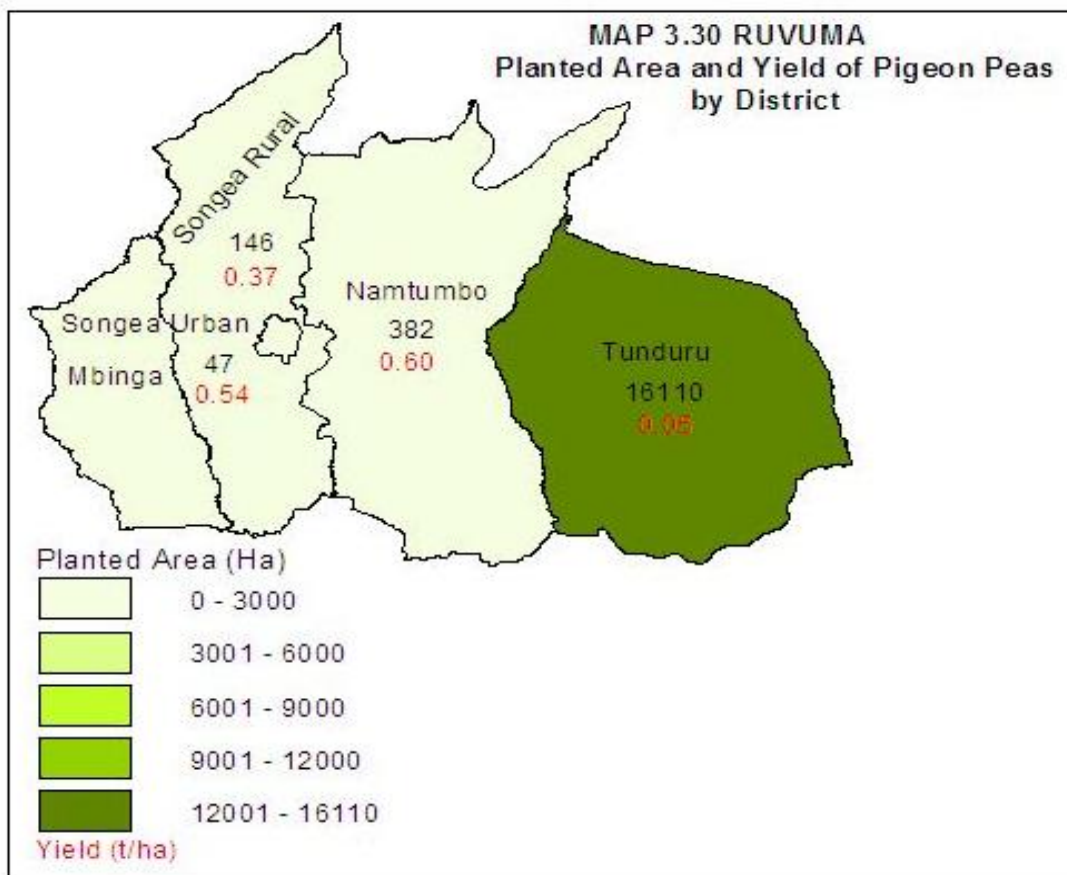
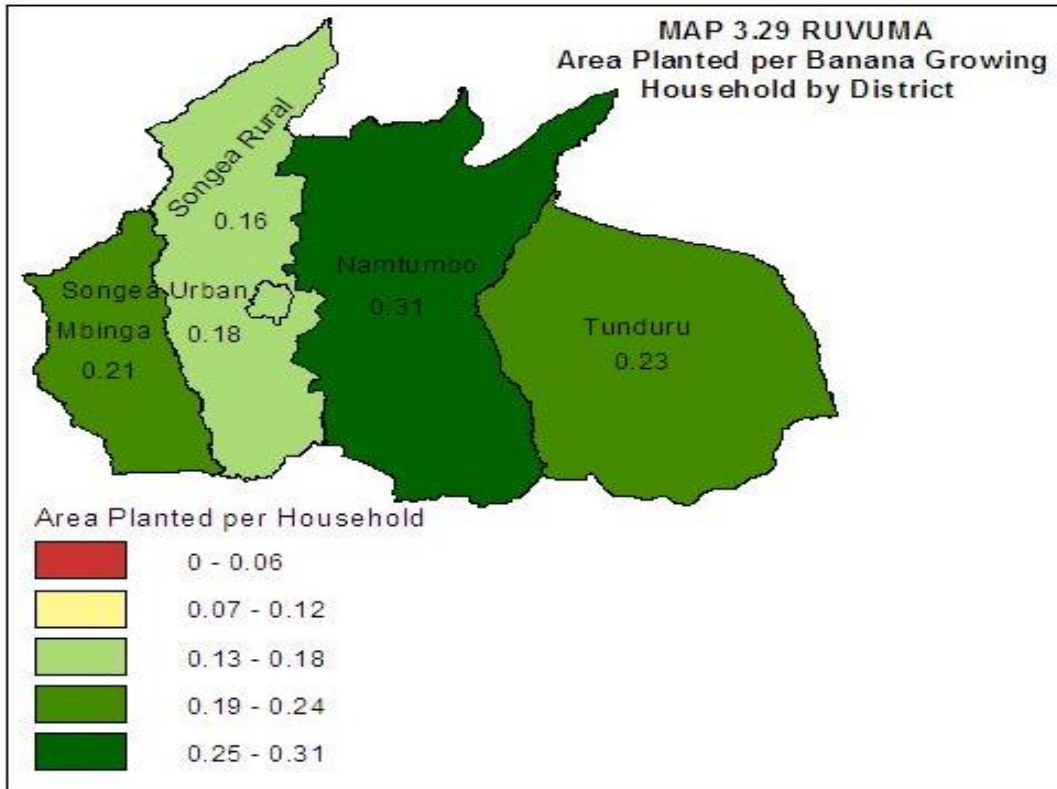


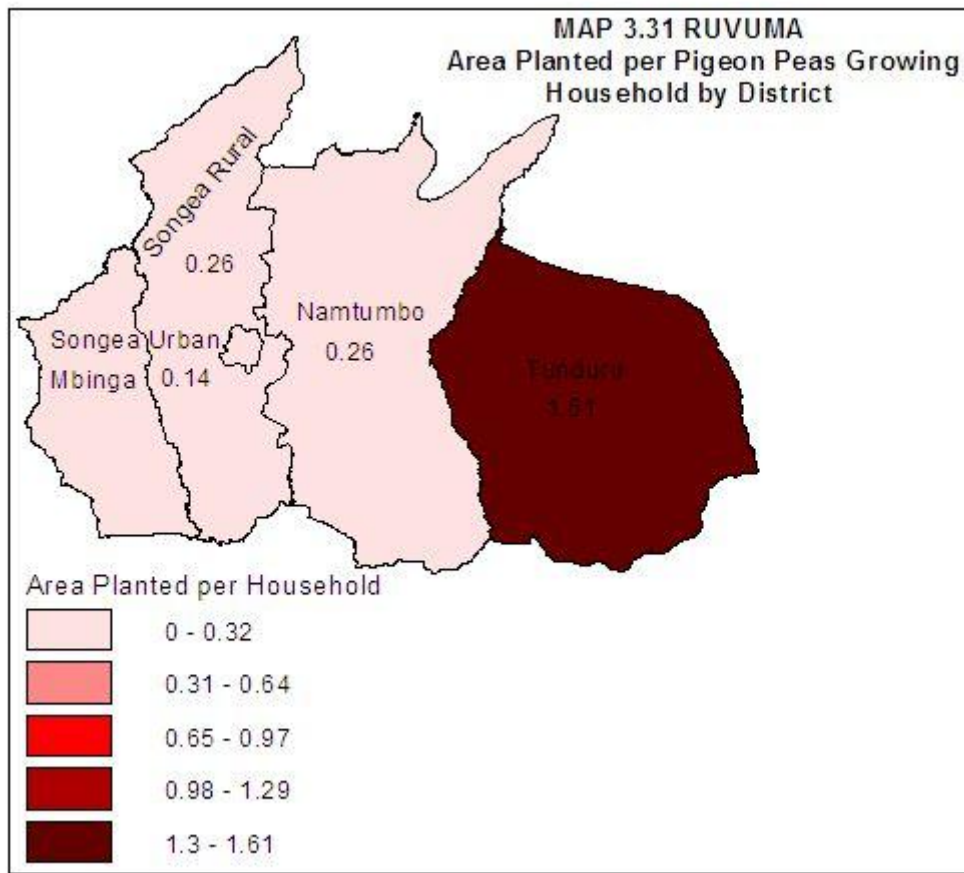












3.5 Input/Farm Implement Use

3.5.1 Implement Use

Hand hoe and sword were the dominant agricultural equipment used by agricultural households (98.7% and 95.5% of the total agricultural households respectively). Other equipment includes hand sprayer (15%) and grater/chipper/oil meals (3.1%). More hand sprayers were found in Songea Urban and Mbinga districts. Other agricultural equipment such as ox plough, ox-planter, tractors and ox cart were owned by less than 0.5 percent of the agricultural households.

Mbinga was the only district with agricultural households using tractors (413 households), while ox planter and ox carts were more concentrated in Songea Rural and Tunduru, (Table 3.9).

Table 3.9 Percentage of Households Using Agricultural Equipment by Type of Equipment and District

Type of Agriculture Equipment	District					Total
	Tunduru	Songea Rural	Mbinga	Songea Urban	Namtumbo	
	Percentage					
Sword/Bush knife	93.1	96.3	98.0	87.8	94.1	95.5
Hand Hoe	99.0	98.3	99.5	98.0	96.8	98.7
Hand Sprayer	5.2	10.6	24.0	24.7	10.4	15.0
Grater, Chipper, Oil Press and Oil Mill	0.5	0.5	6.9	0.0	0.8	3.1
Ox Plough	0.2	0.7	0.2	0.8	0.3	0.3
Ox Seed Planter	0.2	0.5	0.0	0.0	0.0	0.1
Ox Cart	0.2	0.5	0.0	0.0	0.0	0.1
Tractor	0.0	0.0	0.5	0.0	0.0	0.2
Tractor Plough	0.0	0.2	0.0	0.0	0.3	0.1
Tractor Harrow	0.0	0.7	0.0	0.0	0.0	0.1
Castrated bulls	0.0	0.5	0.7	2.0	0.3	0.5
Uncastrated bulls	0.0	1.2	0.7	1.2	0.5	0.6
Cow	0.0	2.5	1.0	5.9	0.3	1.0
Donkey	0.2	0.7	0.0	0.0	0.3	0.2
Shellers/Threshers	0.0	0.5	1.5	0.0	0.0	0.7
Power tiller	0.7	0.2	0.2	0.4	0.0	0.3
Ox Ridger	0.2	0.2	0.2	0.0	0.0	0.2

3.5.2 Input Use

3.5.2.1 Improved Seed Use

The planted area using improved seeds was estimated at 19,427 hectares representing 6 percent of the total area planted with the annual crops and vegetables, (Chart 3.46). The percentage use of improved seed in the short rain season was 5.2 percent, slightly lower than the corresponding percentage use in the long rain season (6.4%).

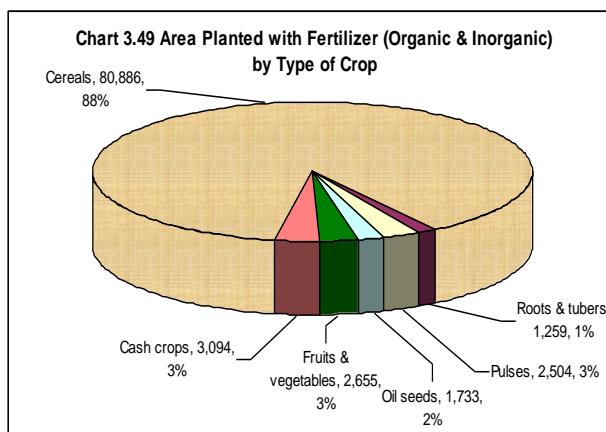
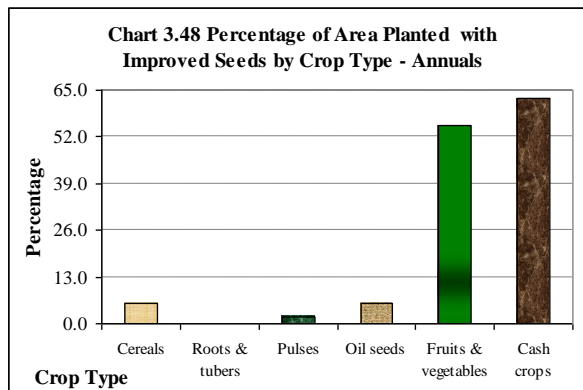
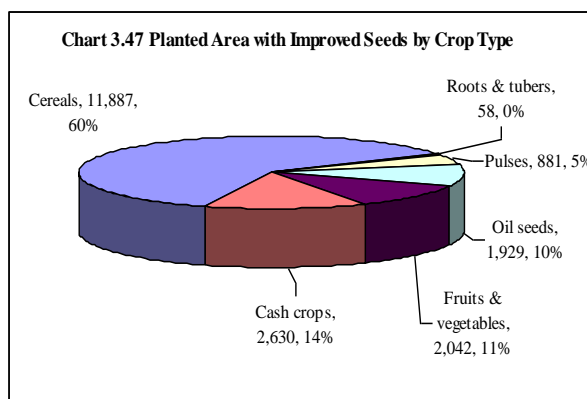
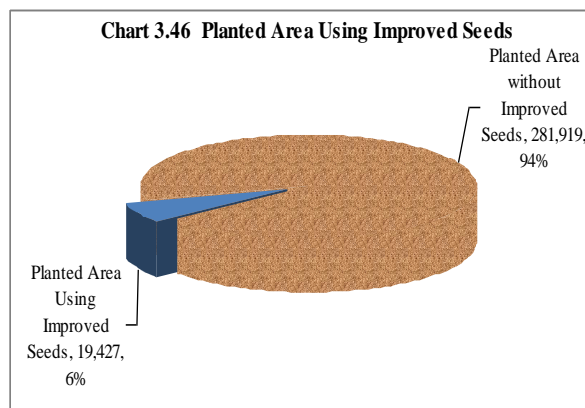
Songea Rural districts had the largest percentage of area planted using improved seeds (41.0% of the total area planted using improved seeds in the region). It was followed by Namtumbo (26.6%), Mbinga (23.0%), Songea Urban (6.1%) and Tunduru (3.2%), (Map 3.35).

Cereals had the largest planted area with improved seeds (11,887 ha, 60% of the planted area with improved seeds) followed by cash crops (2,630 ha, 14%), fruit and vegetables (2,042 ha, 11%), Oil seeds (1,929 ha, 10%), pulses (881 ha, 5%) and roots and tuber (58, 0%), (Chart 3.47). However, when expressed as a percentage of the total area planted with each crop type, the use of improved

seeds in cash crops and fruits and vegetables is much greater than in other crop types (62.6% and 55.3% respectively). Only 5.7 percent of the planted area for oil seed and cereal crops used improved seeds, (Chart 3.48).

3.5.2.2 Fertilizer Use

The use of fertilizer on annual crops was moderate with its application on a planted area of only 92,130 ha (30.6% of the total planted area with annuals and vegetables in the region). Of the planted area with fertilizer application, inorganic fertilizers were applied to 83,182 ha which represents 90.3 percent of the total planted area with fertilizer. Organic fertilizer (compost and farm yard manure) were used on a very small area (8,948 ha) which represented only 9.7 percent of the area planted with fertilizers



The percentage of the planted area applied with fertilizer was highest for cereals (88% of the area planted with an application of fertilizers). Pulses, cash crops and fruits and vegetables accounted for very small percentage of area (3 % for each crop) applied with fertilizers. Roots and tubers and oil seeds accounted for less than 3 percent, (Chart 3.49).

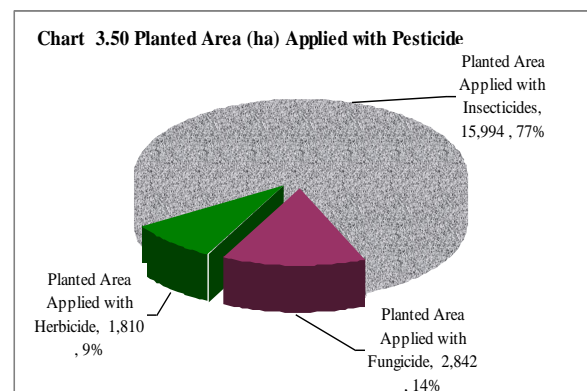
The highest percentage of the area planted with fertilizers (all types) was in Namtumbo (27,378 ha, 29.7%) followed by Songea Rural (25,305 ha, 27.5%), Mbinga (19,453 ha, 21.1%), Tunduru (14,251 ha, 15.5%) and Songea Urban (5,744 ha, 6.2%). Organic fertilizer is mostly used in Mbinga (46% of the total planted area with organic fertilizers), (Table 3.10, Map 3.32).

Table 3.10 Area Planted (ha) Applied with Fertilizer, Type of Fertilizer, Season and District

District	Organic Fertilizer			Inorganic Fertilizer			Total (Organic & Inorganic)		
	Short Rain	Long Rain	Total	Short Rain	Long Rain	Total	Short Rain	Long Rain	Total
Tunduru	0	1,033	1,033	0	13,218	13,218	0	14,251	14,251
Songea Rural	0	1,553	1,553	25	23,727	23,752	25	25,280	25,305
Mbinga	0	4,113	4,113	0	15,339	15,339	0	19,453	19,453
Songea Urban	0	429	429	0	5,315	5,315	0	5,744	5,744
Namtumbo	0	1,820	1,820	0	25,558	25,558	0	27,378	27,378
Total	0	8,948	8,948	25	83,157	83,182	25	92,105	92,130

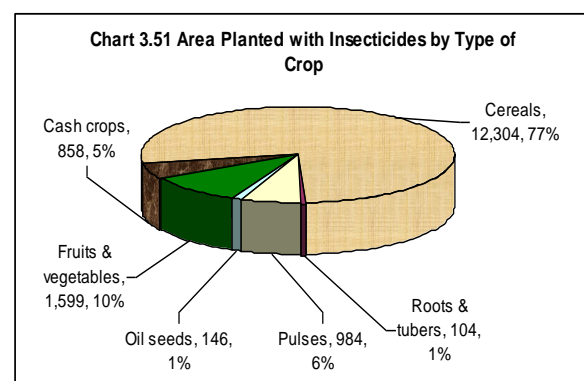
3.5.3 Pesticide Use

Pesticides are chemicals used for controlling insects, diseases and weeds. This section analyses the use of these chemicals by smallholders on annual crops in the region. Pesticides were applied to a planted area of 20,646 ha of annual crops and vegetables. There was no pesticide use during the short rain season. Insecticides are the most common pesticide used in the region (15,994 ha, 77% of the total area applied with pesticides). The area applied with fungicides and herbicides was small compared to that of insecticides (2,842 ha, 14% and 1,810 ha, 9% respectively), (Chart 3.50).



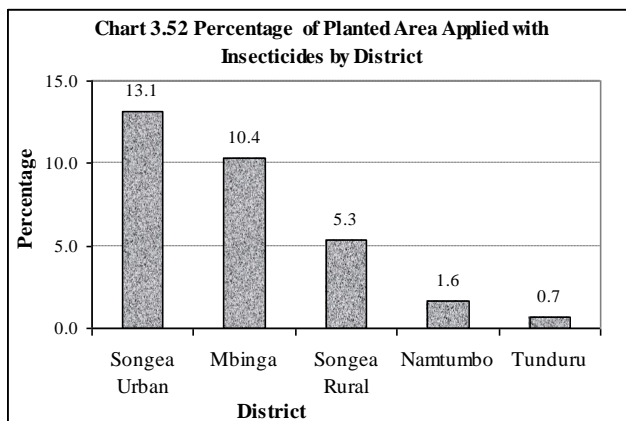
3.5.3.1 Insecticide Use

The planted area applied with insecticides was estimated at 15,994 ha which represented 5.3 percent of the total planted area for annual crops and vegetables. Cereals had the largest planted area applied with insecticides (12,304 ha, 77% of the total planted area with insecticides) followed by



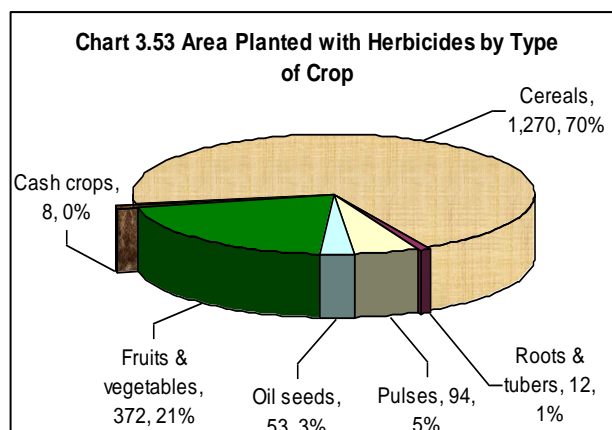
fruit and vegetables (1,599 ha, 10%), pulses (984 ha, 6%) and cash crops (858 ha, 5%). The remaining type of crops had less than 5 percent (Chart 3.51).

Songea Urban had the highest percentage of planted area with insecticides (13.1% of the total planted area with annual crops in the district during long rain season). This was followed by Mbinga (10.4%), Songea Rural (5.3%) and Namtumbo (1.6%). The smallest percentage use was recorded in Tunduru district (0.7%), (Chart 3.52).



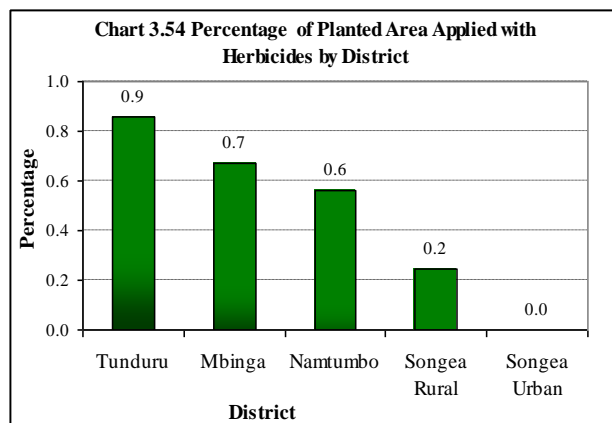
3.5.3.2 Herbicide Use

The planted area applied with herbicides was 1,810 ha which represented 0.6 percent of the total planted area for annual crops and vegetables. Cereals had the largest planted area applied with herbicides (1,270 ha, 70% of the total area applied with herbicides) followed by fruits and vegetables (372 ha, 21%). The percentage use on the remaining crops was minor, (Chart 3.53).



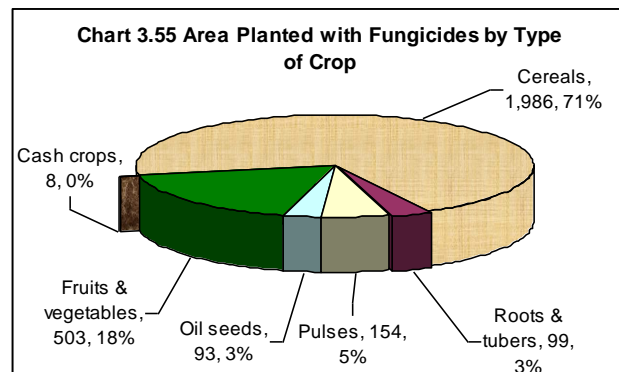
The annual crops with the percentage use of herbicides more than 10 percent in terms of planted area were tomatoes (27.4%), ginger (12.9%) and carrot (10.8%)

Tunduru had the highest percentage of planted area with herbicides (0.9% of the total planted area with annual crops in the district during long rain season). This was followed by Mbinga (0.7%) and Namtumbo (0.6%). The smallest percentage use was recorded in Songea Rural district (0.2%), (Chart 3.54).

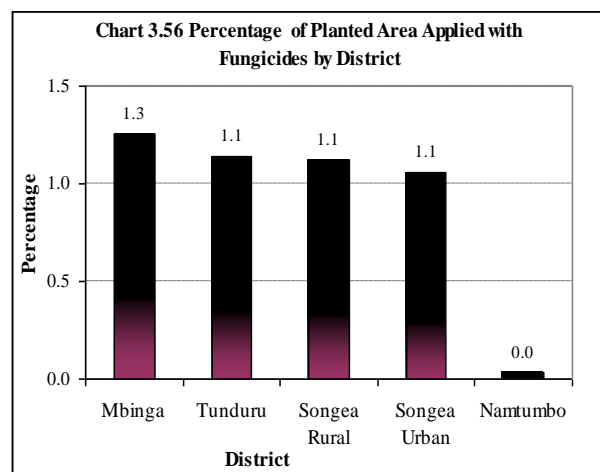


3.5.3.3 Fungicide Use

The planted area applied with fungicides was 2,842 ha which represented 0.9 percent of the total planted area for annual crops and vegetables. Cereals had the largest planted area applied with fungicides (1,986 ha, 71% of the total area applied with fungicides) followed by fruits and vegetables (503 ha, 18%), pulses (2,502 ha, 12%) roots and tubers (154 ha, 5%), and oil crops (93 ha, 3%). The lowest was cash crops (8 ha, 0%), (Chart 3.55).



Mbinga had the highest percentage of planted area with fungicides (1.3% of the total planted area with annual crops in the district during long rain season). This was followed by Tunduru, Songea Rural and Songea Urban with 1.1 percent each. The smallest percentage use was recorded in Namtumbo district, (Chart 3.56).

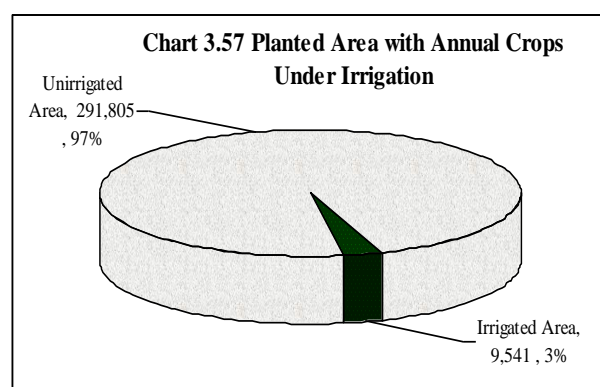


3.6 Irrigation

Water is the limiting factor to crop production in the majority of areas in Tanzania and without it most agricultural practices applied to crops do not result in significant increases in yields. This section deals with the area under irrigation for different crops and the means which used to extract water from the source and applied to the field.

3.6.1 Area Planted with Annual Crops and Under Irrigation

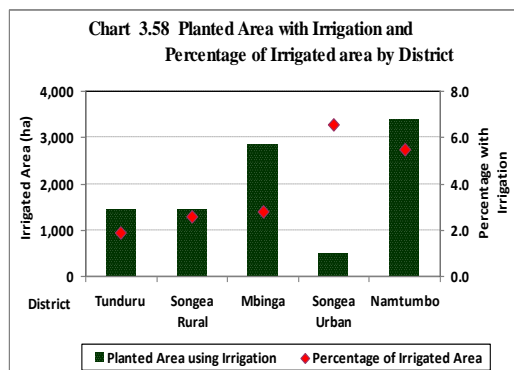
In Ruvuma region, the area of annual crops under irrigation was 9,541 ha representing 3 percent of the total area planted with annual crops. This shows a slight increase of area under irrigation compared to 9,104 hectares of 2002/03 agriculture sample census



(Chart 3.57)

The district with the largest planted area under irrigation with annual crops was Namtumbo (3,392 ha, 35.5% of the total irrigated planted area with annual crops in the region during the long rain season). This` was followed by Mbinga (2,834 ha, 29.7%) then Tunduru and Songea Rural (1,410 ha, 14.8% each).

When expressed as a percentage of the total area planted with annual crops in each district, Songea Urban district had the highest percentage of irrigated area (6.5%), followed by Namtumbo (5.5%), Mbinga (2.8%), Songea Rural (2.6%) and Tunduru (1.9%), (Chart 3.58, Map 3.33).



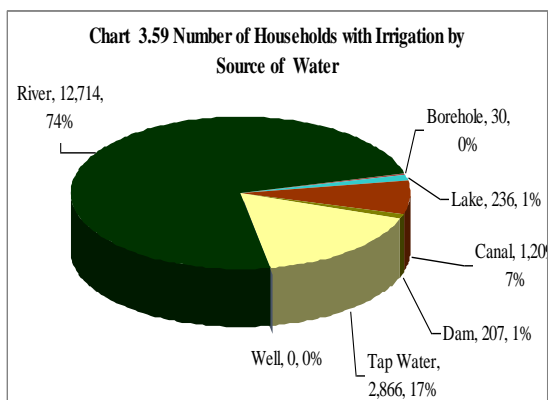
In terms of crop type, the area under irrigation with cereals was 5,996 ha (63% of the total area under irrigation), followed by fruit and vegetables (2,414 ha, 25%). The remaining type of crops together accounted for 14 percent of the total area under irrigation. Almost all of the area under irrigation on cereals was of maize and paddy.

The area of fruit and vegetables under irrigation was 2,414 ha which represents 65 percent of the total planted area with fruit and vegetables.

The number of households practicing irrigation in Ruvuma region appears to have increased over the 5 year inter-censal period from 3,942 households in 2002/03 to 18,499 households in 2007/08. However, the increase in the area under irrigation during that period was slight.

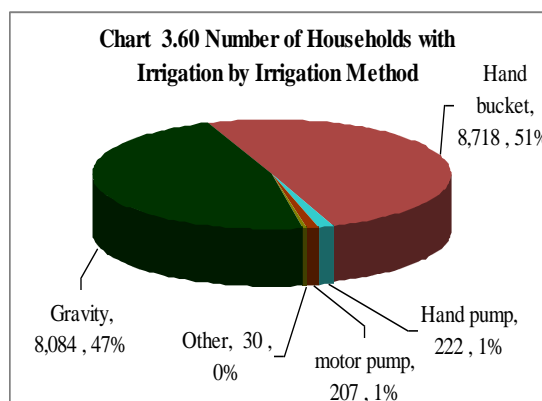
3.6.2 Sources of Water Used for Irrigation

The main source of water used for irrigation was obtained from river (74% of households with irrigation). This was followed by tap water (17%), canals (7%), lake and dam (1% each). Wells and boreholes were uncommon (Chart 3.59).



3.6.3 Methods of Obtaining Water for Irrigation

Hand bucket was the most common method of getting

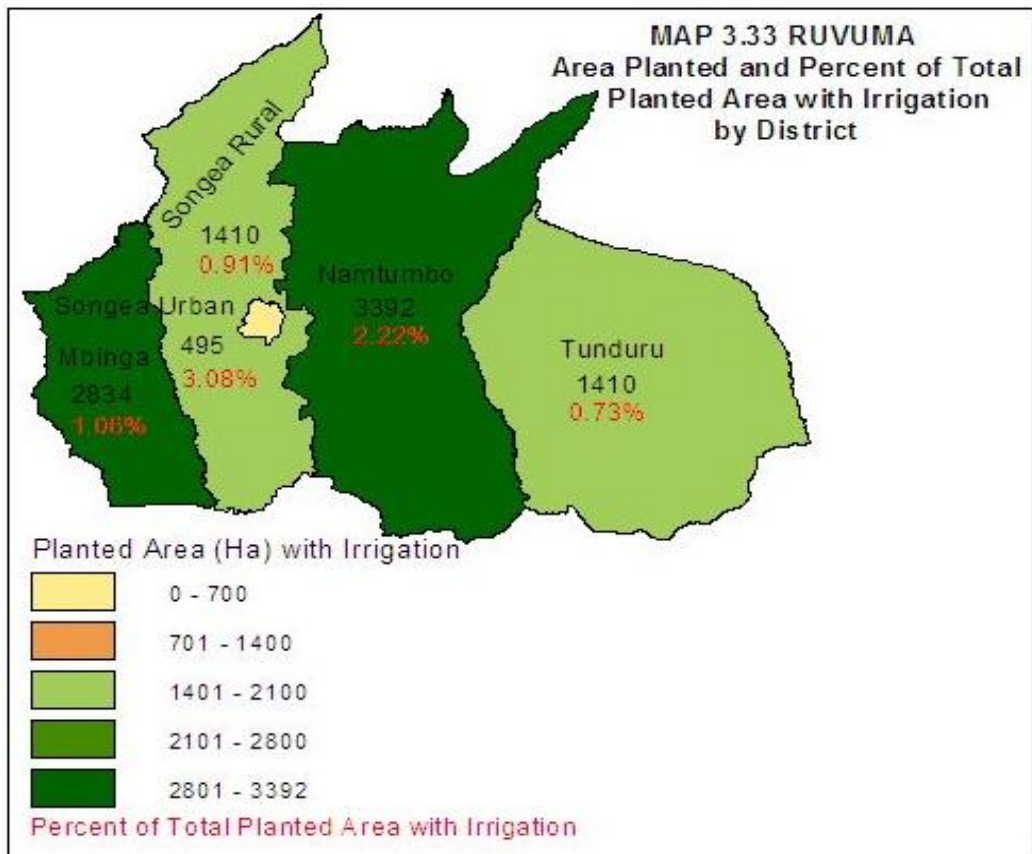
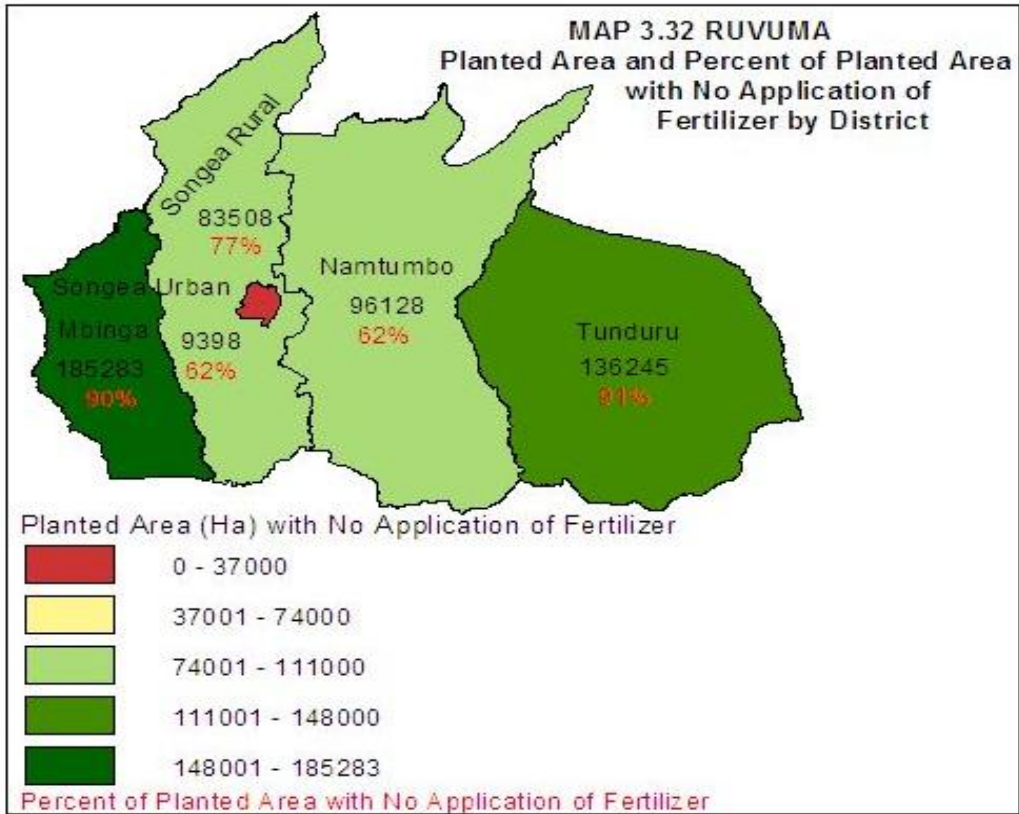


water for irrigation with 51 percent of households practising irrigation. This was followed by gravity with 47 percent of households. The remaining methods (motor pump, hand pump and others) were of minor importance (Chart 3.60).

Mbinga had the largest number of household practicing irrigation though it was second in terms of area under irrigation with a total of 7,228 households (41.9%). This was followed by Songea Rural (24.1%), Namtumbo (17.7%), Songea urban (9.5%) and Tunduru (6.9%). Hand bucket was used by most households with irrigation in Mbinga, followed by Songea Rural, while gravity was more common in Namtumbo and Songea Rural. Hand pumps were found only in Songea Rural and few households in Songea urban. Only Mbinga district recorded to have motor pumps (Table 3.11).

Table 3.11 Number of Households with Irrigation by Method of Obtaining Water and District

District	Main method of Obtaining Water					Total
	Gravity	Hand bucket	Hand pump	motor pump	Other	
Tunduru	395	790	0	0	0	1,184
Songea Rural	2,525	1,466	163	0	0	4,153
Mbinga	1,652	5,369	0	207	0	7,228
Songea Urban	803	743	59	0	30	1,635
Namtumbo	2,710	350	0	0	0	3,060
Total	8,084	8,718	222	207	30	17,260



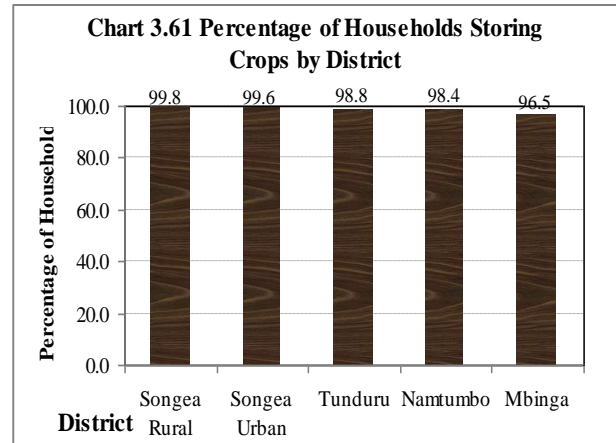
3.7 Crop Storage and Marketing

3.7.1 Crop Storage

Crop storage means keeping a crop for a certain period of time as food for the household, in order to sell at higher prices or as seed for planting in the following season.

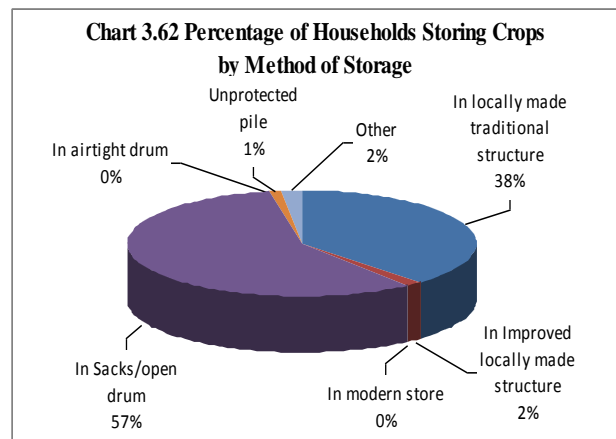
The results for Ruvuma region show that there were 198,021 (94%) crop growing households that stored various agricultural products in the region in 2007/08 agricultural year. The highest percentage of households storing crops was in

Songea Rural (99.8% of the crop growing households in the district), followed by Songea Urban (99.6), Tunduru (98.8%), Namtumbo (98.4%) and the least percentage of household storing crops was in Mbinga (96%.5), (Chart 3.61).



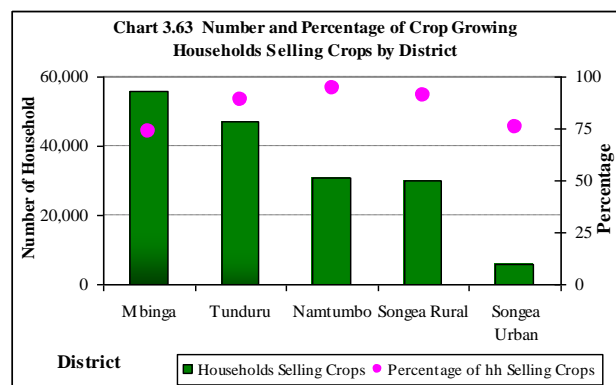
3.7.2 Methods of Storage

Storage in sacks/ open drum was the dominant storage method in the region, with Mbinga district having the highest percentage (57%) of households using this method in the region. The second popular method was locally made traditional structure used by 38 percent of the households storing crops. Other methods were used by few households, (Chart 3.62). The highest percentage of households using locally made traditional structure was in Mbinga (42%) followed by Tunduru (24%), other districts using this method accounted for less than 20 percent of the households storing crops in locally traditional made structure in the region.



3.7.3 Crop Marketing

The number of households that reported selling crops during the short and long rain season was 169,135 which represent 80.4 percent of the total number of crop growing households in the region. The highest percentage of crop growing households selling crops was in Namtumbo

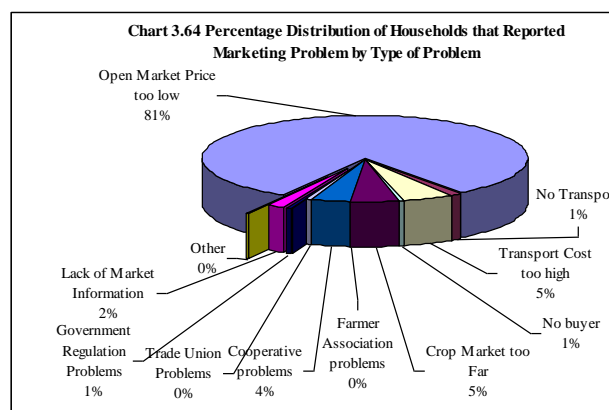


(94.1%), followed by Songea Rural (90.8%), Tunduru (88.6%), Songea Urban (75.4%) and Mbinga (73.6%), (Chart 3.63).

3.7.3.1 Main Marketing Problems

Low price for agricultural produce was the main marketing problem reported by households (81% of crop growing households reporting marketing problems).

Apart from low market prices, other problems were high transport costs (5%), crop markets too far (5%) and cooperative problems (4%). Other marketing problems were minor and included, lack of market information, no buyers, trade union problems, farmers’ association problems and government regulation problems, (Chart 3.64).



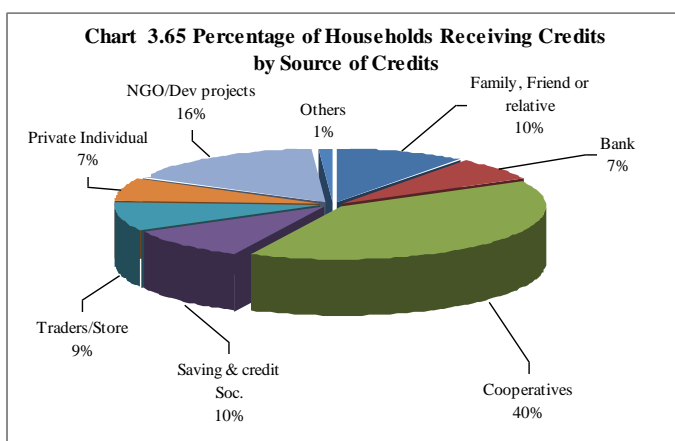
3.8 Access to Crop Production Services

3.8.1 Access to Agricultural Credit

The census result shows that in Ruvuma region very few agricultural households (7,172, 3.4%) accessed credits. Out of which 4,999 (70%) credits were accessed by male household members and 2,173 (30%) credits accessed by household members. In all districts both male and female household members accessed agricultural credit.

3.8.1.1 Source of Agricultural Credit

The major agricultural credit provider in Ruvuma region were cooperatives (40%), followed by NGOs and development projects (16%), saving and credit society and family friends and relatives each with 10 percent, traders/stores (9%), private individuals and banks (7% each), (Chart 3.65).



Households in Mbinga district received most of their credit from family friends or relatives (23.1%), cooperatives (23.1%) and trader/trade store (23.1%). Namtumbo had more household receiving their credits from cooperatives (84.6%), while Songea Urban and Songea Rural relied on saving and credit society (38% and 26.3% respectively) and from NGO/development projects

(23.1% and 42.1% respectively). Tunduru district relied 100 percent on NGOs and development projects for their credits, (Table 3.12).

Table 3.12 Percentage of Households Receiving Agricultural Credits by Source of Credit and District

District	Family, friend or relative	Bank	Cooperative	Savings & credit Soc	Trader/trade store	Private/ Individual	NGO/Development Project	Others	Total
Tunduru	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	100
Songea Rural	5.3	0.0	15.8	26.3	0.0	5.3	42.1	5.3	100
Mbinga	23.1	15.4	23.1	0.0	23.1	15.4	0.0	0.0	100
Songea Urban	5.6	0.0	16.7	38.9	0.0	0.0	38.9	0.0	100
Namtumbo	0.0	3.8	84.6	3.8	0.0	0.0	7.7	0.0	100
Total	10.2	7.0	40.1	9.8	8.6	6.9	16.3	1.1	100

3.8.1.2 Reasons for Not Using Agricultural Credit

The main reason for not using agricultural credit as a source of finance was little credit awareness accounting to 46.3 percent of the agricultural households (“did not know how to get credit” and “don’t know about credit”). This was followed by households reporting the un-availability of credit (19%), “not wanting to go into debt” (13.7%) and difficult bureaucratic procedures (6.9%). The rest of the reasons were given by 14.1 percent of the households.

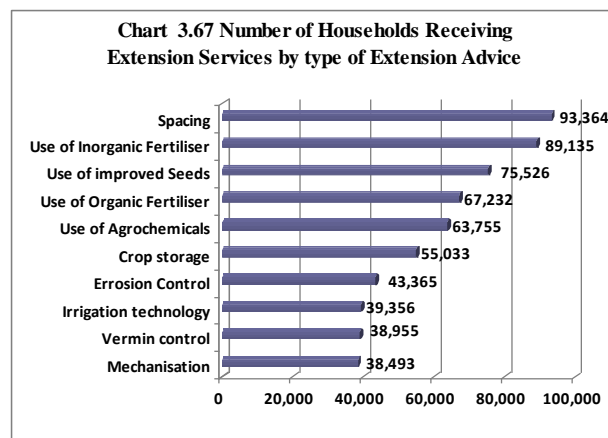
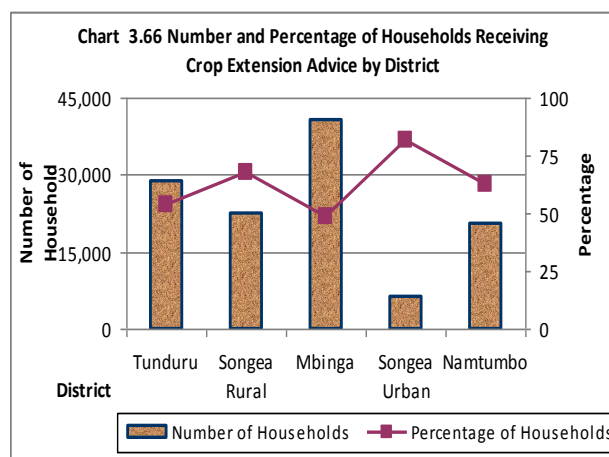
3.8.2 Crop Extension

The number of Agricultural households that received crop extension was 118,320 (56.3% of total agricultural households in the region). Some districts had more access to extension services than others, with Songea Urban having a relatively high proportion of households (82% of the total agricultural household in the district) receiving extension advice, followed by Songea Rural (68%), Namtumbo (62%), Tunduru (54%) and Mbinga (49%) (Chart 3.66, Map 3.34).

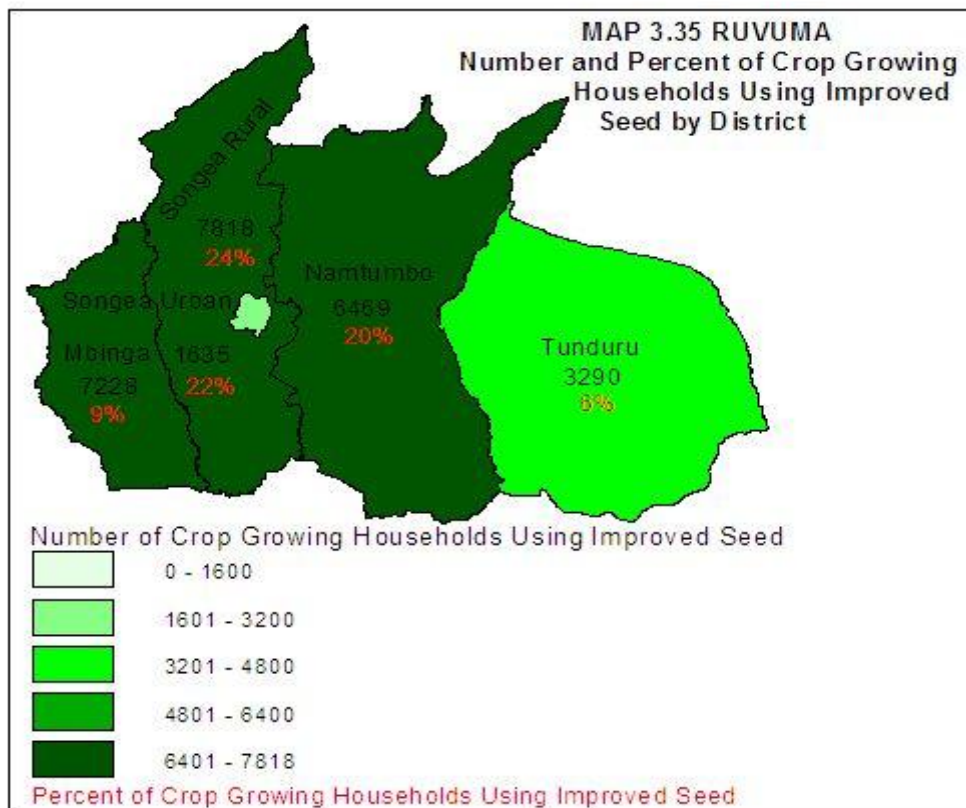
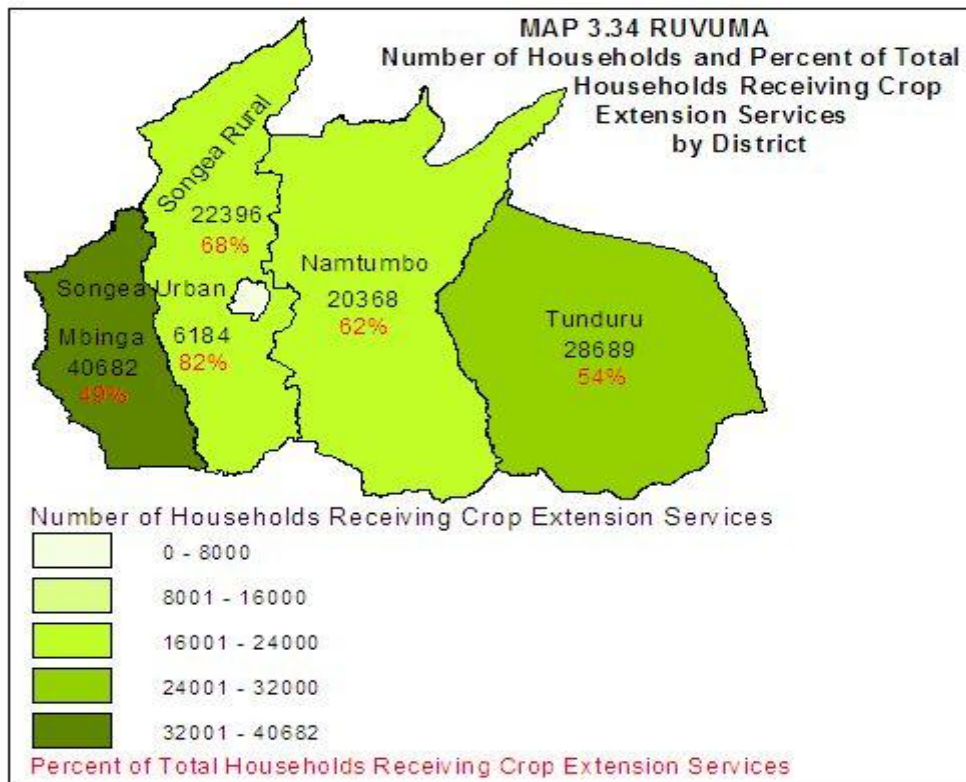
3.8.2.1 Type of Crop Extension

Messages

Majority of household received extension advice on crop spacing, followed by use of inorganic fertilizers, use of improved seeds, use of organic fertilizers and use of agrochemicals. Other advices were on crop storage, erosion control, irrigation technologies, vermin control and



mechanisation, (Chart 3.67). Most of the households received extension advice from the Government (84% of the total households receiving extension advice), followed by those received from neighbours (21%) and radio/television/news paper (17.7%).

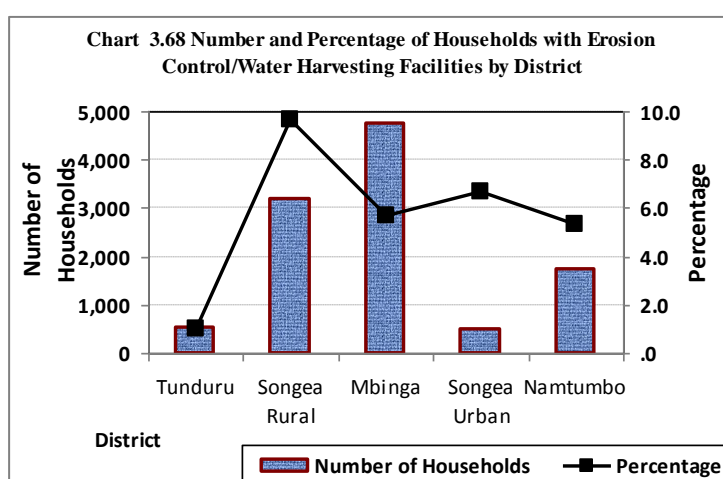


3.9 Erosion Control Facilities

Erosion control and water harvesting facilities are grouped together as they normally have dual purposes of reducing erosion and increasing the amount of water available for crop production.

The number of agricultural households that had soil erosion problem on their farming land was 18,636 households (8.9% of the total agricultural households in the region). However the number of households having soil erosion control/ water harvesting facilities on their farming land was only 10,706 which represent 5.1 percent of the total agricultural households in the region.

The proportion of households with soil erosion control and water harvesting facilities was highest in Songea Rural (9.6%) followed by Songea Urban (6.7%), Mbinga (5.7%), Namtumbo (5.3%) and Tunduru (1%), (Chart 3.68). Terraces accounted for 79.3 percent of the total number of structures, followed by vetiver grass (14.5%), erosion control bunds (2.5%), tree belts (1.9%) and others (1.7%).



Songea Rural had the highest number of erosion control/water harvesting facilities (659,246, 81% of the total regional structures). It was far followed by Namtumbo (120,897 structures, 15%). The remaining districts accounted for less than 5 percent of the total structures in the region, (Table 3.13).

Table 3.13 Number of Erosion Control/water Harvesting Structures by Type and District

District	Terraces	Erosion Control Bunds	Gabions / Sandbag	Vetiver Grass	Tree Belts	Water Harvesting Bunds	Drainage Ditches	Others	Total Structures	Percentage
Tunduru	0	0	0	0	3,948	263	526	0	4,738	1
Songea Rural	641,166	17,509	0	0	407	0	163	0	659,246	81
Mbinga	3,511	1,652	0	2,272	10,325	0	5,989	413	24,162	3
Songea Urban	1,070	833	0	30	0	0	89	178	2,200	0
Namtumbo	1,311	612	262	116,438	874	787	612	4,895	125,792	15
Total	647,059	20,606	262	118,740	15,555	1,050	7,379	5,487	816,137	100

3.10 LIVESTOCK RESULTS

Generally, almost all types of livestock in Ruvuma region were increasing during the period from 1999 to 2008 except for sheep which showed a declining trend. Cattle increased from 75,000 in 1995 to 121,000 in 2003, before declining to 75,000 in 2008. Pigs increased from 89,600 to 183,000 as well as chicken from 1,100,000 to 1,700,000, during the eight year period from 1995 to 2008, (Table 3.14).

Table 3.14 Livestock Population by Year of Count

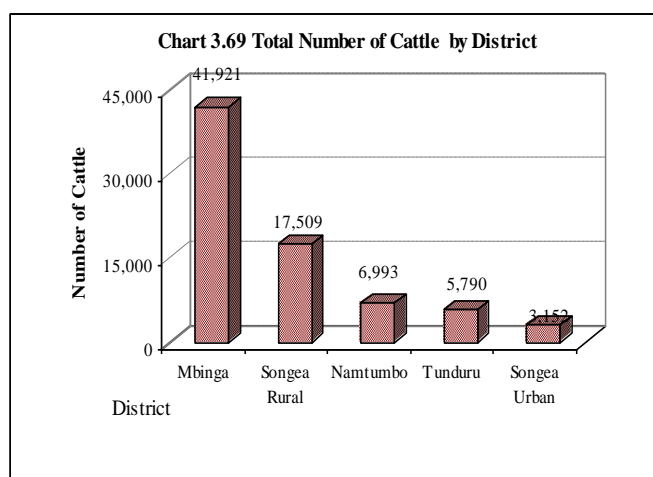
Year of Count	Cattle	Goats	Sheep	Pigs	Chicken
1995	75,027	348,509	41,890	89,600	1,092,234
1999	79,969	537,843	49,801	182,347	1,799,158
2003	121,175	309,595	24,458	134,951	1,555,617
2008	75,366	344,738	20,535	183,276	1,701,242

3.10.1 Cattle Production

The total number of cattle in the region was 75,366. Cattle were the dominant livestock type in the region followed by goats, sheep and pigs. The region had 0.4 percent of the total cattle population on Tanzania Mainland.

3.10.1.1 Cattle Population

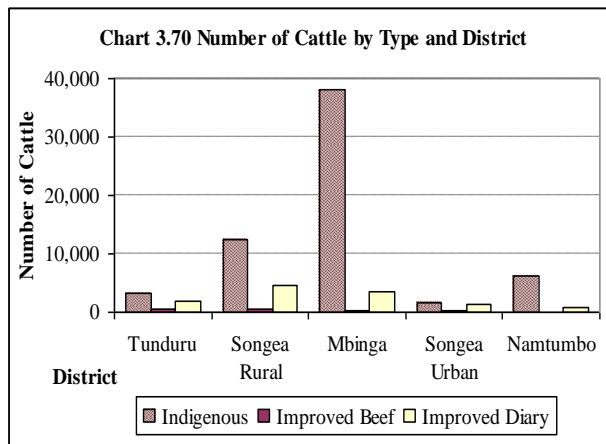
The number of indigenous cattle in Ruvuma region was 61,768 (82 % of the total number of cattle in the region), 12,177 cattle (16%) were improved dairy breeds and 1,420 cattle (2%) were improved beef breeds. The census results show that 25,755 agricultural households in the region (41% of total livestock keeping households) kept cattle.



This was equivalent to an average of 3 heads of cattle per cattle-keeping-household.

The district with the largest number of cattle was Mbinga which had about 41,921 (56% of the total cattle in the region). This was followed by Songea Rural (17,509 cattle, 23%), Namtumbo (6,993 cattle, 9%), Tunduru (5,790 cattle, 8%) and Songea Urban (3,152 cattle, 4%), (Chart 3.69). However, Songea Urban district had the highest density (196 head per km²), (Map 3.38 & 3.39).

The number of beef cattle was very small (2% of the entire cattle population) while improved dairy constituted 16 percent of total cattle population in the region. Songea Rural district had the largest number of dairy cattle (4,642 cattle, 38%). It was followed by Mbinga with 3,511 (29%), Tunduru (1,842 cattle, 15%), Songea Urban (1,308 cattle, 11%) and Namtumbo (874 cattle, 7%), (Chart 3.70).

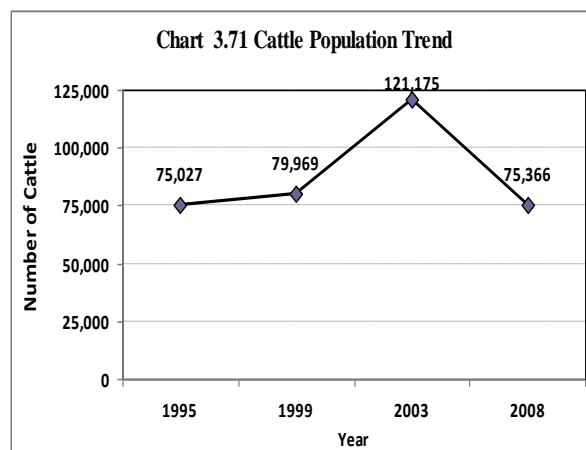


3.10.1.2 Herd Size.

Ninety one percent of the cattle rearing households had herd of size between one and five cattle with an average of two cattle per household. However they keep 68 percent of all the cattle in the region. Herd sizes of 6-30 accounted for about 28 percent of all the cattle with an average of 10 cattle per household. Only 2% of the households kept large numbers of cattle 20 herd and above.

3.10.1.3 Cattle Population Trend

Cattle population in Ruvuma increased during the eight-year period from 75,027 in 1995 to 121,175 Cattle in 2003. This implies an overall positive average annual growth rate of 6.2 percent. There was a small increase in number of cattle during the five-year period from 1995 to 1999 at the rate of 1.6 percent whereby the number increased from 75,027 to 79,969. The number of cattle increased from 79,969 in 1999 to 121,175 in 2003 at the rate of 10.9 percent. Thereafter, there was an annual decrease of -9.1% from 121,175cattle in 2003 to 75,366 cattle in 2008 representing a -37.8% decline in number. Over the thirteen year period (1995-2008) the annual growth rate was 0.03%, (Chart 3.71).

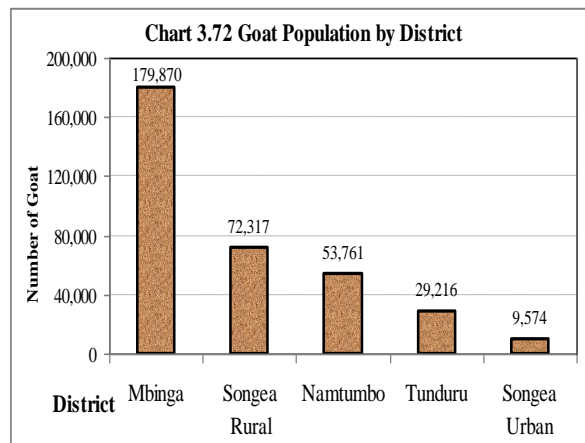


3.10.2 Goat Production

Goat rearing was the second most important livestock keeping activity in the region followed by pig and sheep rearing. In terms of total number of goats on the Mainland, Ruvuma region ranked 16 out of the 21 regions with 2 percent of the total goats on the Mainland.

3.10.2.1 Goat Population

The number of goat-rearing-households in Ruvuma region was 78,037 (37% of all agricultural households in the region) with a total of 344,738 goats giving an average of 5 head of goats per goat rearing- household. Mbinga had the largest number of goats (179,870 goats, 52% of all goats in the region), followed by Songea Rural (72,317 goats, 21%), Namtumbo (53,761 goats, 16%) and Tunduru (29,216 goats, 8%). Songea Urban district had the least number of goats (9,574 goats, 3%), (Chart 3.72 and Map 3.40). However, Mbinga district had the highest goat density (671 head per km²) (Map 3.41).



3.10.2.2 Goat Herd Size

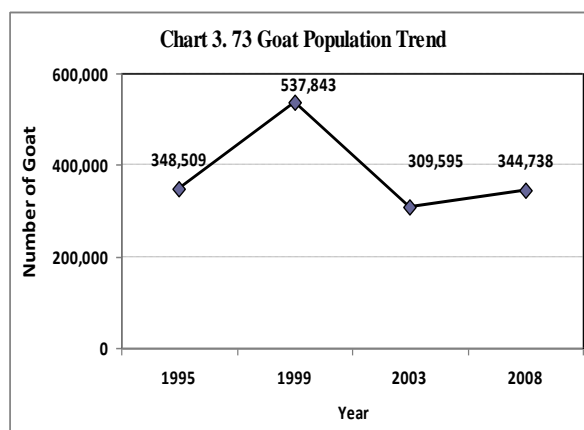
91 percent of all goat keeping households had herd sizes of 1-4 goats kept 72 percent of the total goats in the region averaging at two goats per goat keeping household. 99.6 percent of the households were keeping goats the size of 1-14 which accounted for 95 percent of the total goats. The results reveal that there were no households keeping goats in the size class 20-24. The results also show that the regional average number of goats per household in 2008 was two.

3.10.2.3 Goat Breeds

Goat husbandry in the region was dominated by the indigenous breeds (338,561) that constituted 98 percent of the total goats in Ruvuma region. The improved goats for meat (1,346 goats) and improved dairy goats (4,832 goats) constituted 0.4 and 1.4 percent respectively to total goats in the region.

3.10.2.4 Goat Population Trend

The overall average annual growth rate of goat population from 1995 to 2008 was -0.08 percent. This negative trend implies thirteen years of population decrease from 348,509 in 1995 to 344,738 in 2008. The number of goats increased from 348,509 in 1995 at an estimated annual rate of 11.5 percent to 537,843 in 1999. From 1999 to



2003, the goat population decreased at an annual rate of -12.9 percent and thereafter there was a small increase of 2.2% from 2003 to 2008 (Chart 3.73).

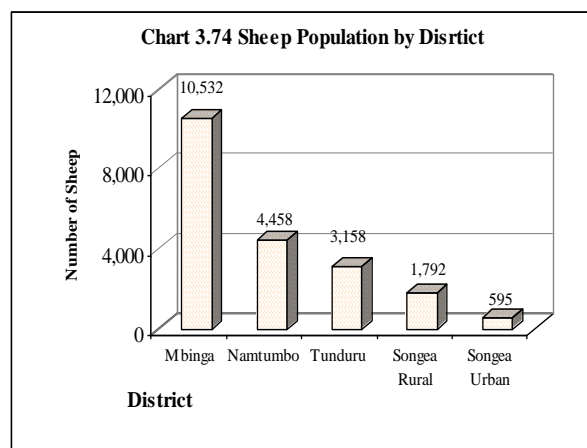
3.10.3 Sheep Production

Sheep rearing was the fourth most important livestock keeping activity in Ruvuma region after cattle, goats and pig. The region ranked 19 out of 21 Mainland regions and had 0.4 percent of all sheep on Tanzania Mainland.

3.10.3.1 Sheep Population

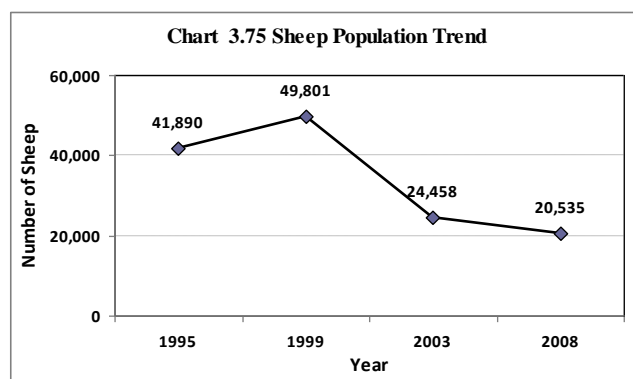
The number of sheep-rearing households was 5,703 (2.7% of all agricultural households in Ruvuma region) rearing 20,535 sheep, giving an average of 4 heads of sheep per sheep-rearing household.

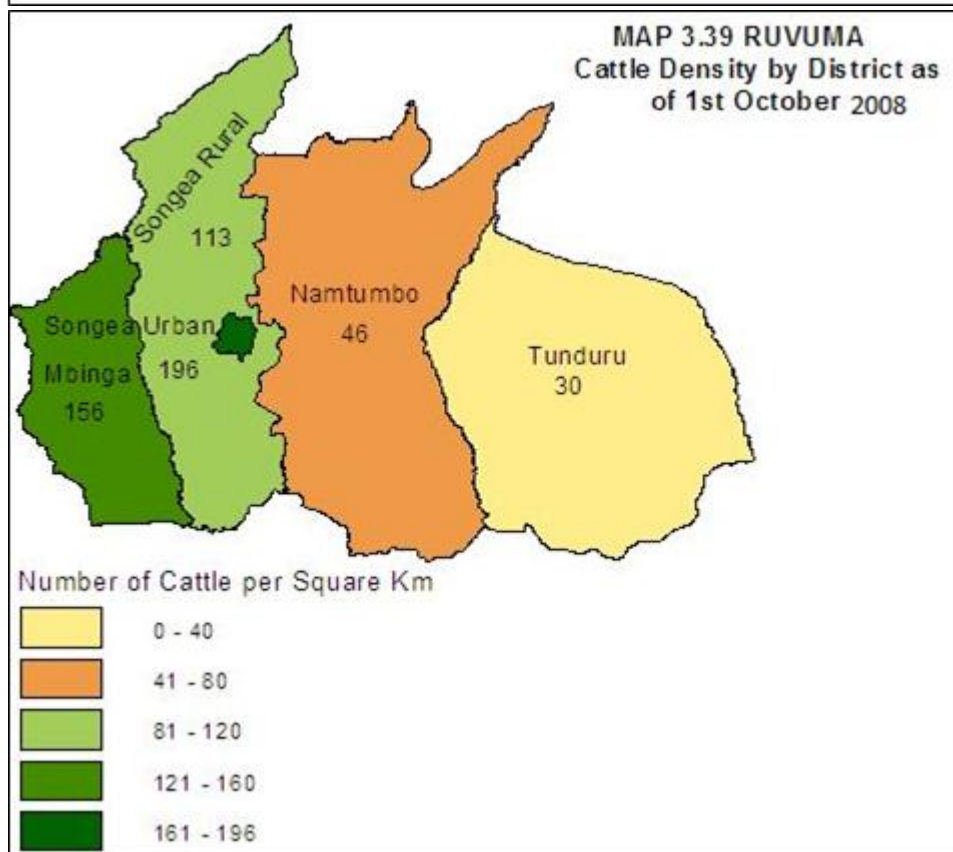
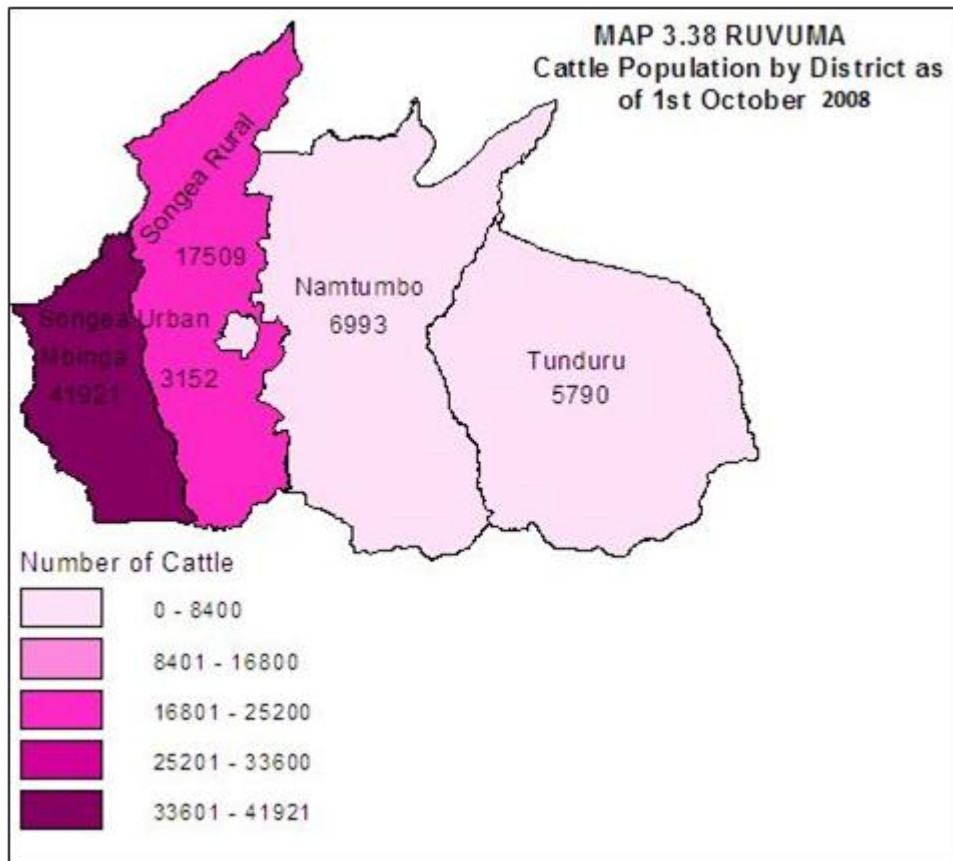
The district with the largest number of sheep was Mbinga with 10,532 sheep (51% of total sheep in Ruvuma region) followed by Namtumbo (4,458 sheep, 22%), Tunduru (3,158 sheep, 15%), Songea Rural (1,792 sheep, 9%) and Songea Urban (595 sheep, 3%), (Chart 3.74). Sheep rearing was dominated by indigenous breeds that constituted nearly 100 percent of all sheep kept in the region.

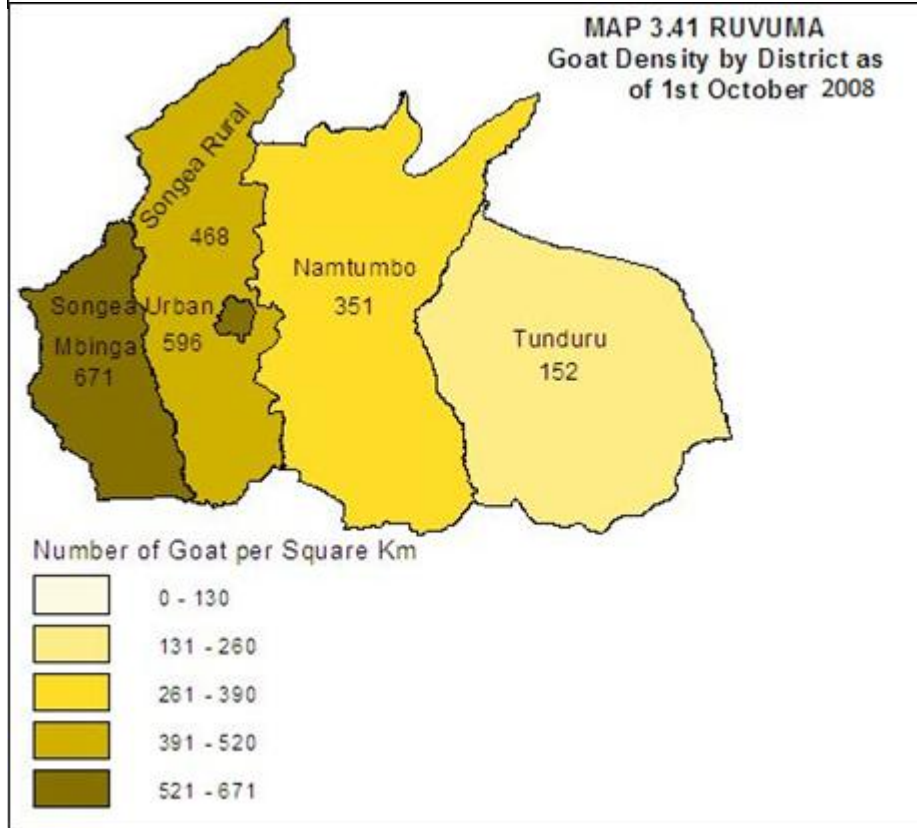
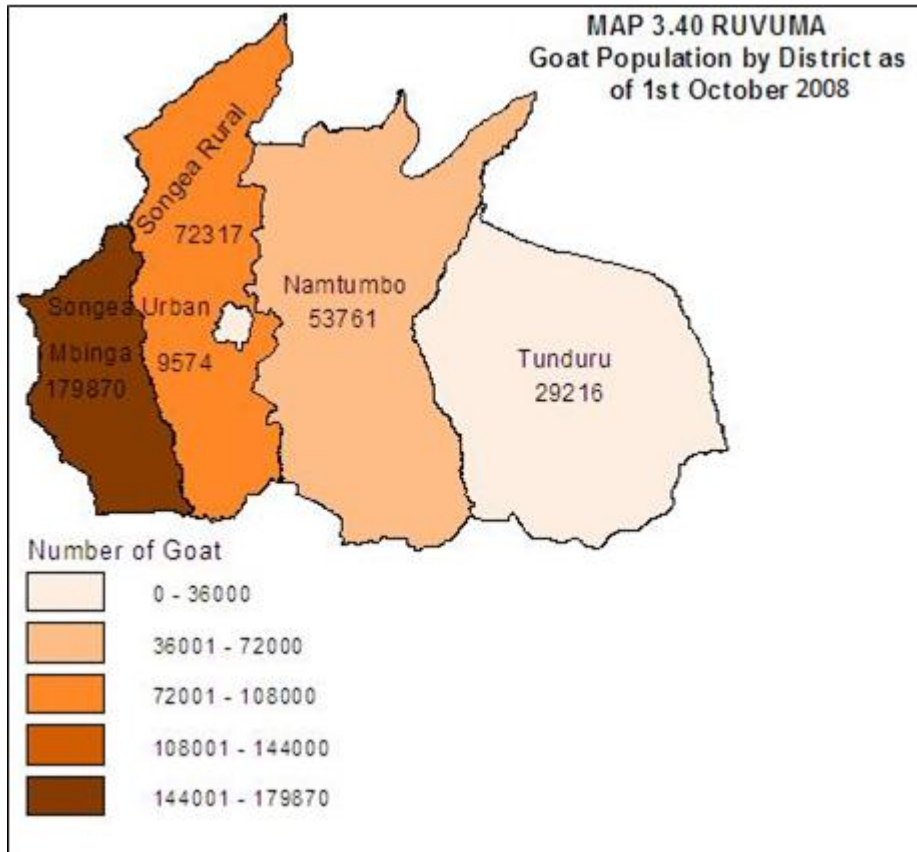


3.10.3.2 Sheep Population Trend

The overall annual growth rate of the sheep population for the thirteen-year period from 1995 to 2008 was estimated at -5.34 percent. The population increased at an annual rate of 4.4 percent from 41,890 in 1995 to 49,801 in 1999. From 2003 to 2008, sheep population decreased at an annual rate of -3.4 percent (Chart 3.75).







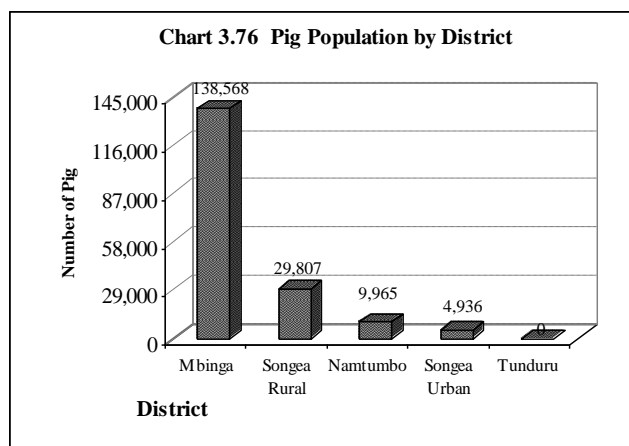
3.10.4 Pig Production

Piggery was the third most important livestock keeping activity in the region after cattle and goats. The region ranks 3 out of 21 Mainland regions and had 11.6 percent of the total pigs on Tanzania.

3.10.4.1 Pig Population

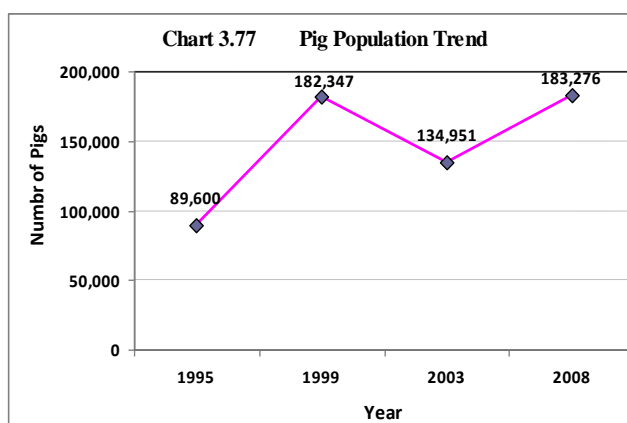
The number of pig-rearing agricultural households in Ruvuma region was 64,624 (30.7% of the total agricultural households in the region) rearing 183,276 pigs. This gives an average of 3 pigs per pig-rearing household.

The district with the largest number of pigs was Mbinga with 138,568 pigs (76% of the total pig population in the region) followed by Songea Rural (29,807 pigs, 16%), Namtumbo (9,965 pigs, 5%) and Songea Urban (4,936 pigs, 3%). No pigs were recorded in Tunduru district, (Chart 3.76, Map 3.44). Mbinga had the highest density of pig per km² (517 pigs), (Map 3.45).



3.10.4.2 Pig Population Trend

The overall annual growth rate of the pig population for the eight years period from 1995 to 2003 was 5.6 percent. During this period the population grew from 89,600 to 134,951. The pig population increased from 89,600 in 1995 to 182,347 in 1999 at the rate of 19.4 percent. The growth rate dropped to -7.2 percent during the following four years from 1999 to 2003 in which pig population decreased from 182,347 to 134,951. Thereafter, there was an increase of 26% to 183,276 pigs representing an annual growth rate of 6.3 percent between 2003 and 2008 (Chart 3.77).



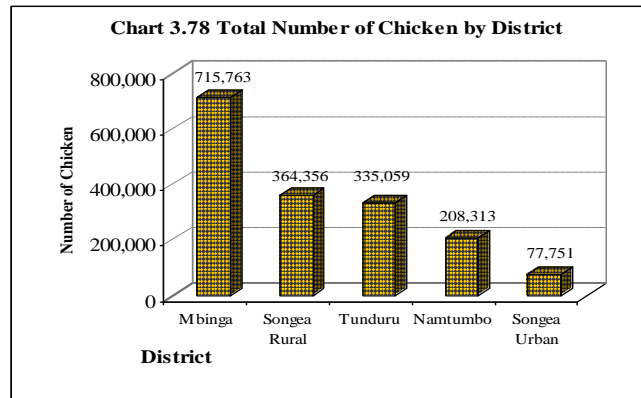
3.10.5 Chicken Production

The poultry sector in Ruvuma region was dominated by chicken production. The region contributed 4 percent to the total chicken population on Tanzania Mainland.

3.10.5.1 Chicken Population

The number of households keeping chicken was 149,313, raising about 1,701,242 chickens. This gives an average of 11 chickens per chicken-rearing household. In terms of total number of chicken in the country, Ruvuma region was ranked eleventh out of the 21 Mainland regions.

The District with largest number of chickens was Mbinga (715,763 chickens, 42% of the total number of chickens in the region), followed by Songea Rural (364,356 chicken, 21 %), Tunduru (335,059 chicken, 20%), and Namtumbo (208,313 chicken, 12%). Songea Urban district had the smallest number of chicken (77,751, 5%), (Chart 3.78 and Map 3.42). However,

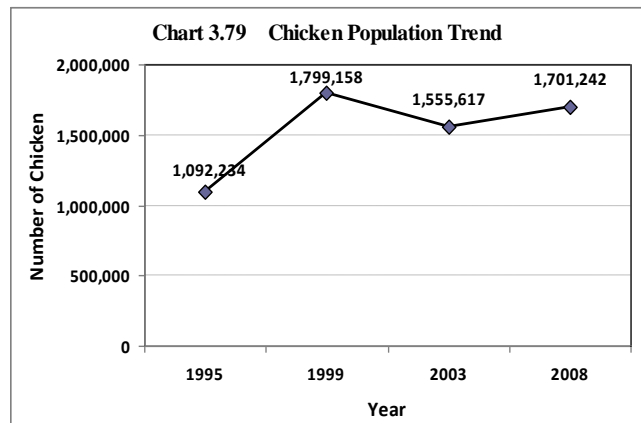


Songea Urban district had the highest density (4,836 head per km²), (Map 3.43).

3.10.5.2 Chicken Population

Trend

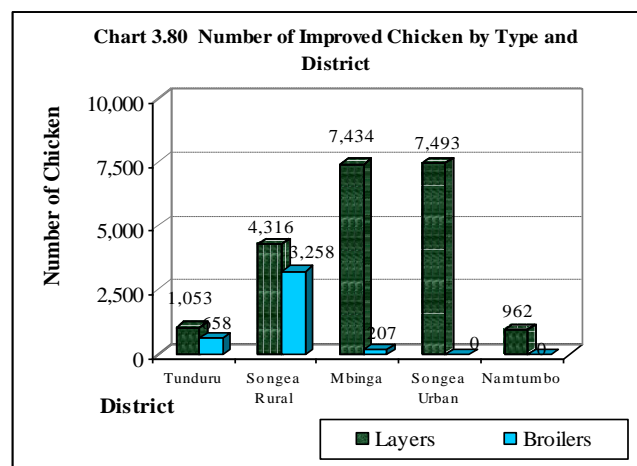
The overall annual population growth rate for chicken during the thirteen year period from 1995 to 2008 was 3.5 percent. The population increased at a rate of 13.3 percent from 1995 to 1999 after which it decreased at -3.6 percent for the four-year period from 1999 to 2003.



Thereafter, there was a small increase (9%) from 1,555,617 to 1,701,242 chickens between 2003 and 2008 representing an annual growth rate of 1.8% (Chart 3.79).

3.10.5.3 Chicken Flock Size

The results indicate that about 92% (1,557,562 chicken) of all chicken are kept in flock size of 1-49 chicken, 7 percent (125,720 chicken) are kept in flock size 50-99 chicken and only one percent are kept in the class of 100 chicken and above. When classified by type of chicken the results show that about 99% (1,675,862 chickens) are indigenous



chicken, 1.2% are layers and less than one percent are broilers.

3.10.5.4 Improved Chicken (layers and broilers)

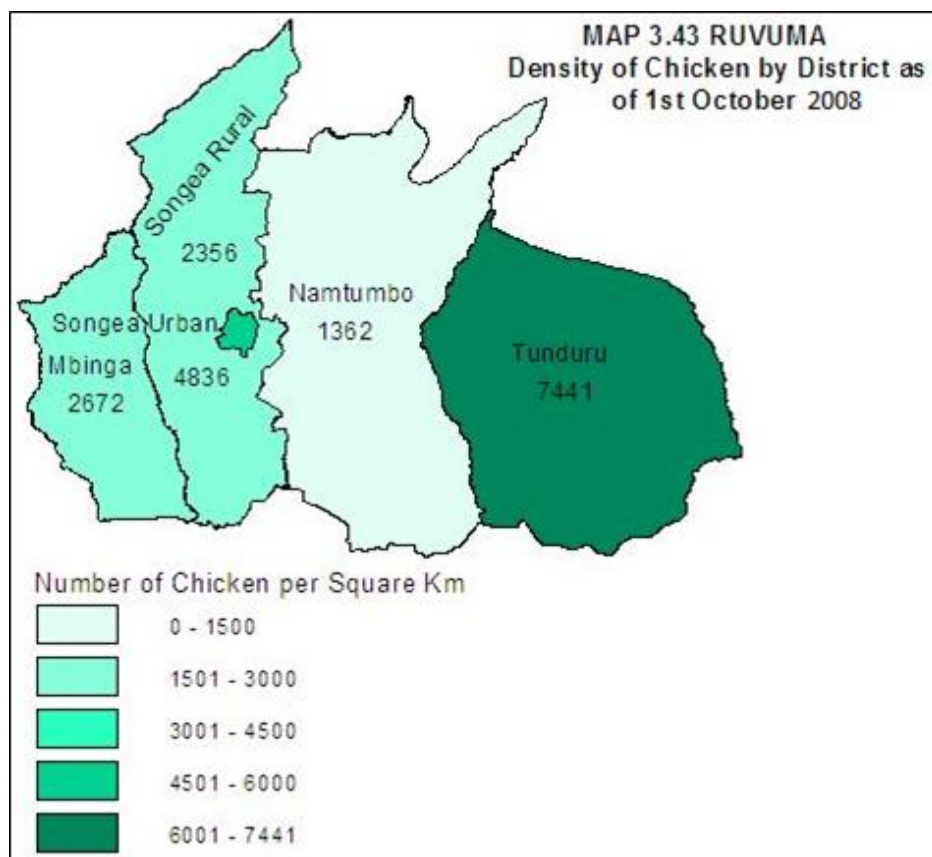
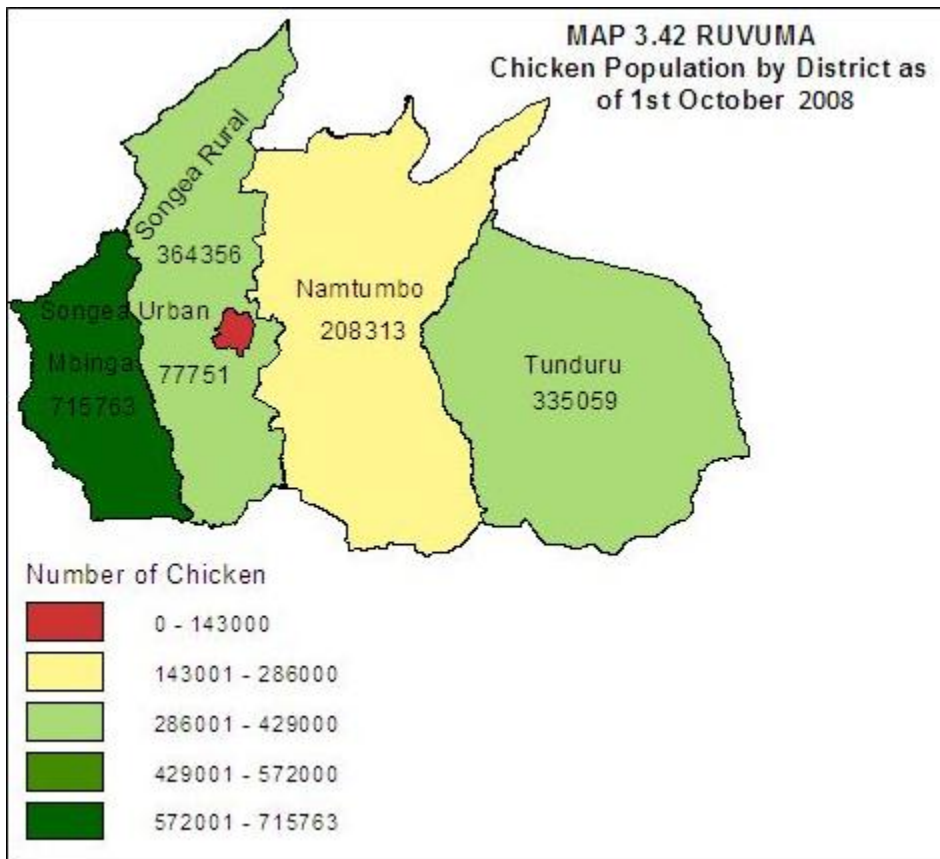
Improved chicken formed a very small fraction of the total chicken population. There were 21,258 (1.2%) layers and 4,122 broilers (0.2%) in the region. The remaining fraction (98.5%) was of indigenous types. Most of the layers were kept in Mbinga and Songea districts, while there were more broilers in Songea Rural than in other districts (Chart 3.80). The dominance of indigenous breed makes the population trend for the indigenous chicken more-or-less the same as that of the total chickens in the region.

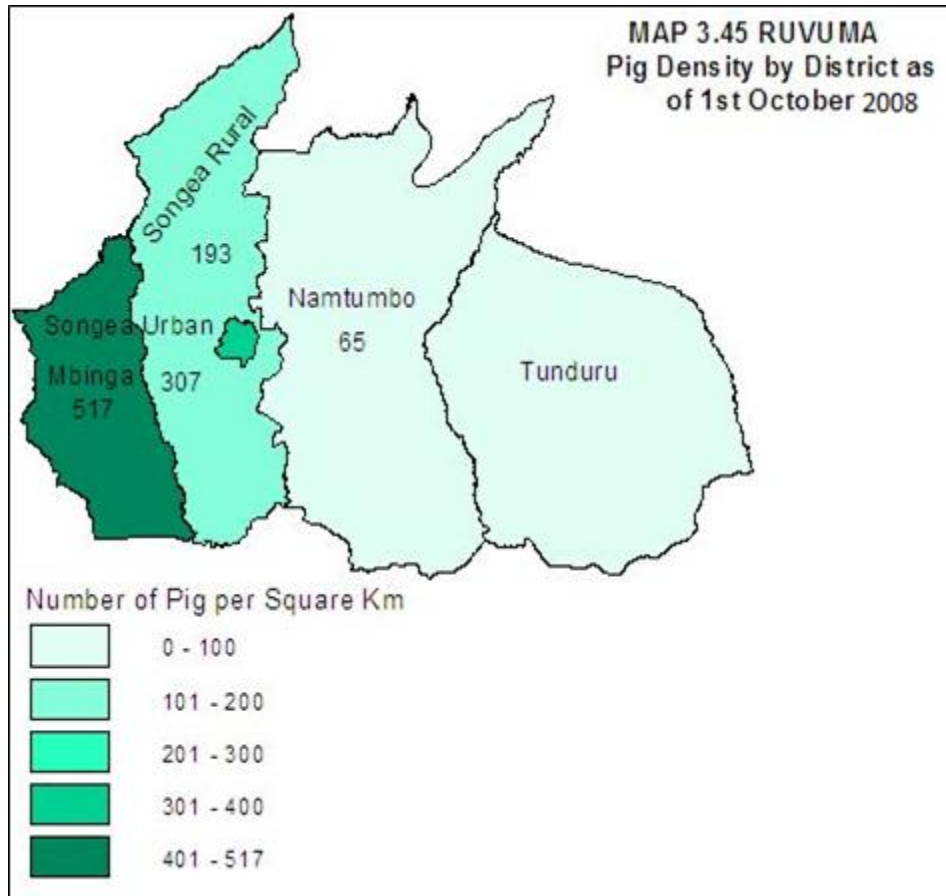
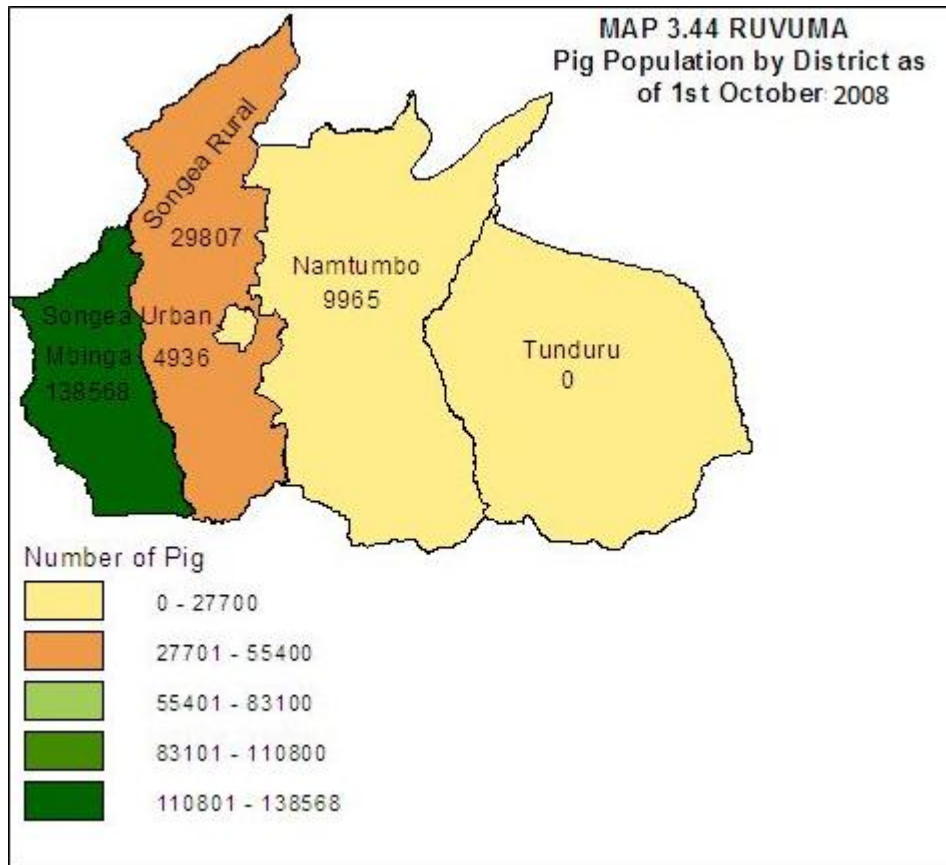
3.10.6 Other Livestock

Other livestock are kept in small numbers in Ruvuma region. The largest number was 22,020 for guinea pigs, followed by 20,156 for ducks, 14,158 dogs, 10,354 rabbits, and 2,145 donkeys. There were no turkeys and horses reported in the region. The biggest number of ducks in the region was found in Mbinga district (8,467 ducks, 42% of the total duck in the region), followed by Namtumbo (5,857 ducks, 29%). The least number of ducks was in Songea Urban (Table 3.15)

Table 3.15 Number of Other Livestock by Type of Livestock and District as of 1st October 2008

District	Type of Livestock						
	Ducks	Guinea pigs	Turkeys	Rabbits	Donkeys	Horses	Dogs
Tunduru	2,106	8,291	.	395	.	.	526
Songea Rural	3,013	326	.	163	.	.	3,828
Mbinga	8,467	12,184	.	8,673	1,446	.	5,782
Songea Urban	714	1,219	.	773	.	.	1,487
Namtumbo	5,857	.	.	350	699	.	2,535
Total	20,156	22,020	.	10,354	2,145	.	14,158

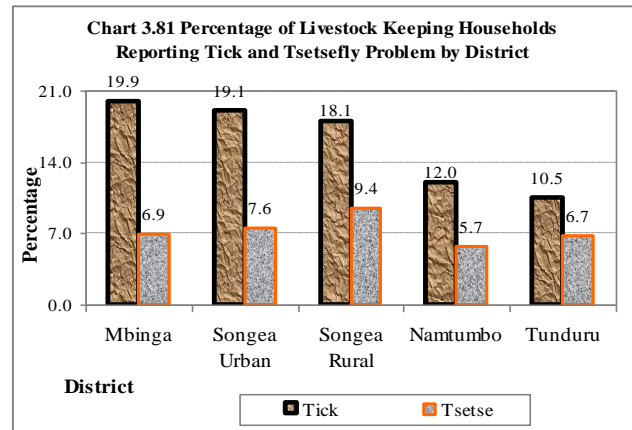




3.10.7 Disease and Pest Control

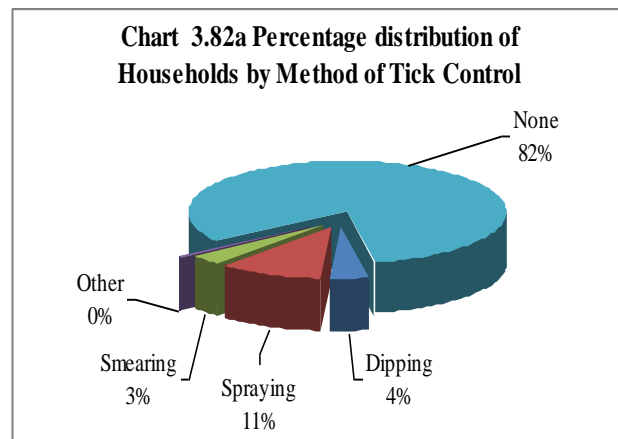
Ticks and Tsetse fly

The results indicate that 16.6 percent and 7.1 percent of the total livestock-keeping households reported to have encountered ticks and tsetse fly problems respectively. Chart 3.81 shows that there was a predominance of tick related diseases over tsetse related diseases. The percentage of households encountering tick problem was highest in Mbinga followed by Songea Urban and Songea Rural while the percentage were relatively lower in Namtumbo and Tunduru districts.

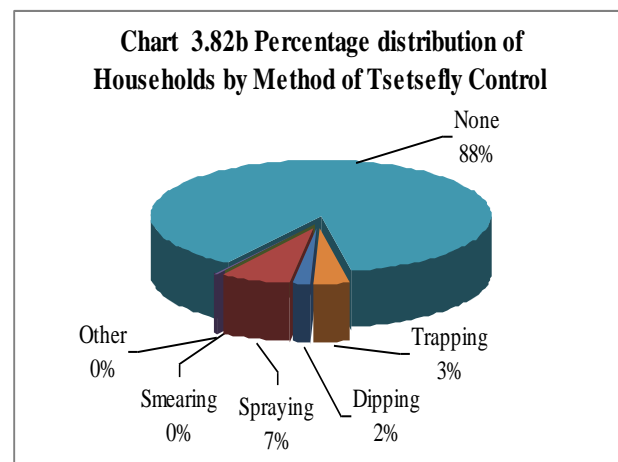


As for Tsetse fly, the highest percentage of households reporting the problem was in Songea Rural and lowest in Namtumbo.

The most practiced method of tick controlling was spraying (11 percent of all livestock-rearing households in the region using the methods). Other methods used were dipping (4%), smearing (3%) and other traditional methods like hand picking (0.2%). However, 82 percent of livestock-keeping households did not use any method (Chart 3.82a).



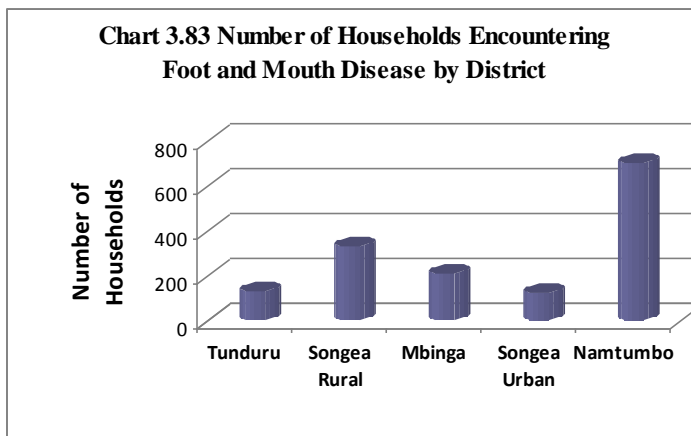
The most common method used to control tsetse flies was spraying which was practiced by 6.7 percent of livestock-rearing households. This was followed by trapping (3.3%), dipping (1.6%) and others (0.2%). However, 88.2 percent of the livestock rearing households did not use any of the three aforementioned methods, (Chart 3.82b).



Foot and mouth disease

Foot and mouth disease infection were also inquired for cattle, goats, sheep, and pigs. The disease infected 1,482 households representing 0.9 percent of total livestock keeping households in the region.

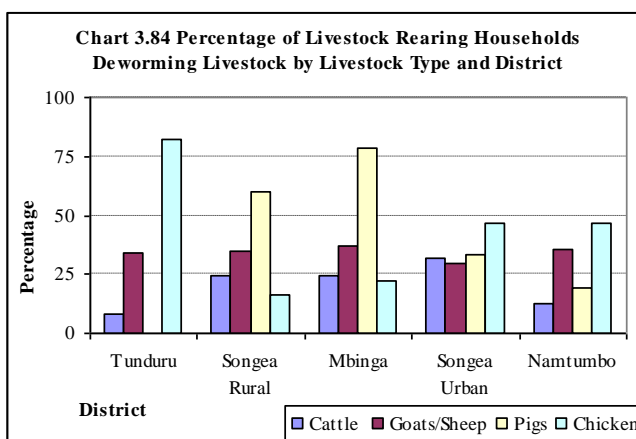
The district with the highest number of livestock keeping households infected with foot and mouth diseases was Namtumbo 699 (47.2%), followed by Songea Rural (326 households, 22%), Mbinga (207 household, 14%), Tunduru and Songea Urban (132 household, 8.9% and 119 households, 8% respectively), (Chart 3.83).



Deworming

The percentage of households that dewormed their livestock was 50 percent. More households dewormed pigs (41%), followed by households deworming goats and sheep (24%), chicken (21 %) and cattle (14%).

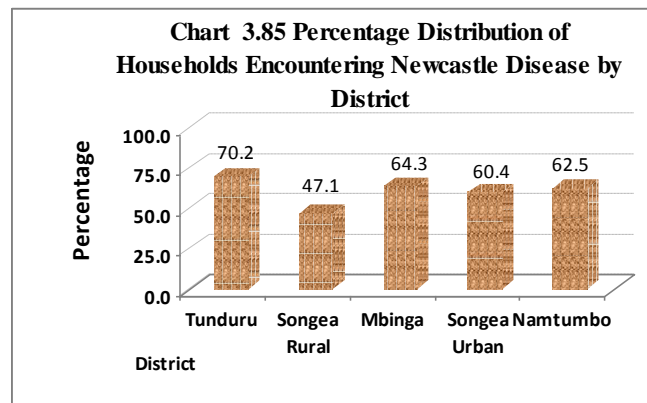
The number of households deworming cattle was high in Songea Urban, while in the remaining districts deworming was moderate and was lowest in Tunduru. Percentage distribution of household deworming goats or sheep was near equal across districts, while for pigs Mbinga recorded higher number of household followed by Songea Rural. No pig deworming was recorded in Tunduru district although the district exhibited the highest number of household reported to deworm chicken, (Chart 3.84).



Newcastle Disease

Newcastle problem was a notorious problem encountering livestock rearing households in the region. The disease affected 101,803 livestock keeping households in Ruvuma region (61.9% of livestock keeping households).

The district found with highest percentage of households encountering disease includes Tunduru (70.2% of the household in the district). It was followed by Mbinga (64.3%), Namtumbo (62.5%) and Songea Urban (60.4%). Songea Rural had lower percentage of household encountering Newcastle disease (47%), (Chart 3.85).

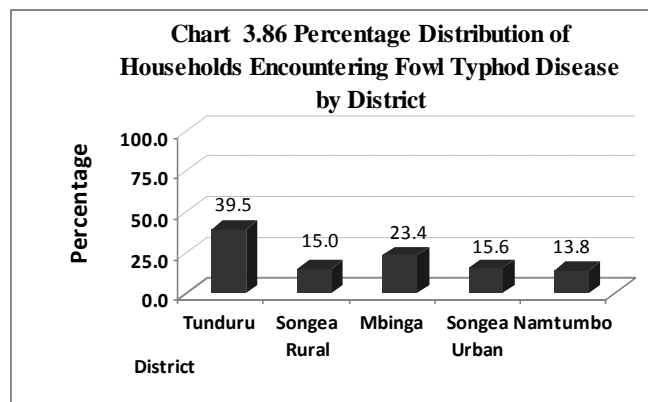


The affected households were noted to use two control methods namely: vaccination (46,427 household, 28% of livestock keeping households) and local herbs used by 39,871 household (24%). Households found not using any control methods for Newcastle disease were 78,129, which represent 48 percent of livestock keeping households.

Fowl Typhoid

There were 38,152 households equivalent to 23 percent of total livestock rearing household reporting cases of Fowl typhoid in Ruvuma.

The highest percentage of households reporting incidences of the disease were in Tunduru (39.5%, as percent of livestock



keeping household in the district) followed by Mbinga (23.4%), Songea urban (15.6%), Songea Rural (15.0%) and the lowest percentage were in Namtumbo (13.8%), (Chart 3.86).

Control of Fowl typhoid was mainly through vaccination (7,975 households, 5%) and use of local herbs (25,827 households, 16%). About 80 percent of the households did nothing to control the disease.

3.11 Animal Contribution to Crop Production

3.11.1 Use of Draft Power

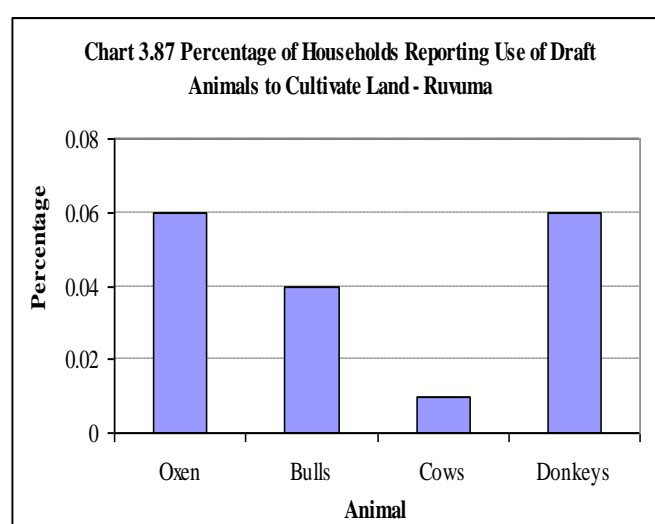
Use of draft animals in Ruvuma was very limited. Only one percent of the total agricultural households in the region reported using cows for agricultural purposes. This was followed by uncastrated bulls 0.6%, castrated bulls 0.5% and oxen pulling oxen ploughs 0.3%. Other animals which were used by less than 0.3% of the total households in the region were oxen pulling ox seed planters, pulling carts, pulling ridgers and donkeys.

Songea rural district was leading in using for agricultural purposes, ox ploughs, ox seed planters, ox carts, and donkeys. Mbinga had largest number of households using castrated bulls (620 households) and uncastrated bulls (620 households), (Table 3.16).

Table 3.16 Number of Households Reporting the Use of Animals by Type of Animal and by District

District	Ox Plough	Ox Seed Planter	Ox Cart	Castrated bulls	Uncastrated bulls	Cow	Donkey	Ox Ridger	Total Agriculture Households
Tunduru	132	132	132	0	0	0	132	132	53,299
Songea Rural	244	163	163	163	407	814	244	81	32,983
Mbinga	207	0	0	620	620	826	0	207	83636
Songea Urban	59	0	0	149	89	446	0	0	7582
Namtumbo	87	0	0	87	175	87	87	0	32781
Total	729	294	294	1018	1291	2,174	463	420	210,281

Cultivating land was another way of using draft animals in the region. However, the practice is not important in Ruvuma. Only 0.06% of the total agricultural households used oxen and donkeys for cultivating land followed by bulls 0.04% and cows 0.01%. The households in Mbinga and Namtumbo districts are not practicing the use of draft animals for cultivation. On the other hand the households in Tunduru district used oxen



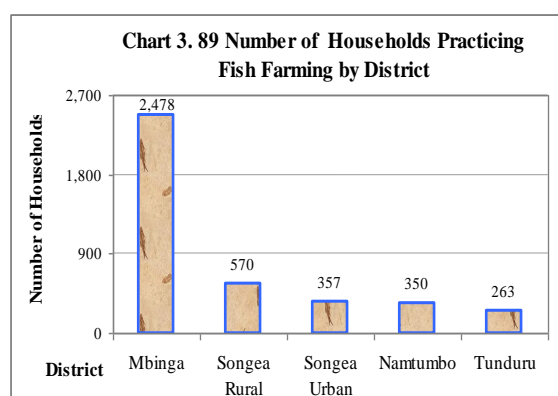
(132 households) and donkeys (132 households) for cultivating land. Songea rural households (81) used bulls, and Songea urban households (30) used cows, (Table 3.17).

Table 3.17 Number of Agricultural Household Used Draft Animals to Cultivate Land by District

District	Oxen	Bulls	Cows	Donkeys	Total Agricultural Households
Tunduru	132	0	0	132	53299
Songea Rural	0	81	0	0	32983
Mbinga	0	0	0	0	83636
Songea Urban	0	0	30	0	7582
Namtumbo	0	0	0	0	32781
Total	132	81	30	132	210281
%	0.06	0.04	0.01	0.06	100

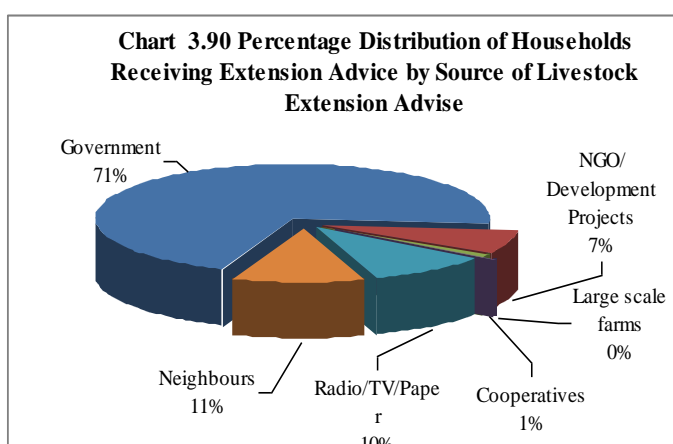
3.12 Fish Farming

The number of households involved in fish farming in Ruvuma region was 4,018 representing about 2 percent of the total agricultural households in the region. Fish were raised mainly in dug out ponds (95%) and the main fish species planted was Tilapia. Mbinga district had the highest number of household practicing fish farming (2,478 households, 62% of all household in the region). It was followed by Songea Rural (570 household, 14%), Songea Urban (357 households, 9%), Namtumbo (350 households, 9%), and Tunduru (263 households, 7%), (Chart 3.89).



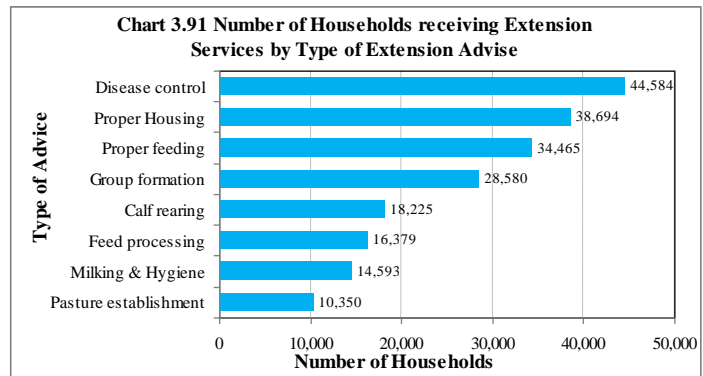
3.13 Access to Livestock Extension Services

The total number of households that received livestock advice was 70,129 representing 43 percent of the total livestock-rearing households and 33.0 percent of the agricultural households in the region. The main livestock extension agent was the government which provided service to about 71 percent of all households receiving livestock extension



services. The rest of the households received services from Neighbours (11%), Radio/TV or Newspaper (10%), NGOs/development projects (7%), cooperatives (1%) and large-scale farmers (0%), (Chart 3.90).

Disease control was the highest ranking extension advice given to many households. It was followed by proper animal housing, proper feeding and group formation. Others with moderate number of household include calf rearing, feed processing, milking and milk hygiene and pasture establishment (Chart 3.91).

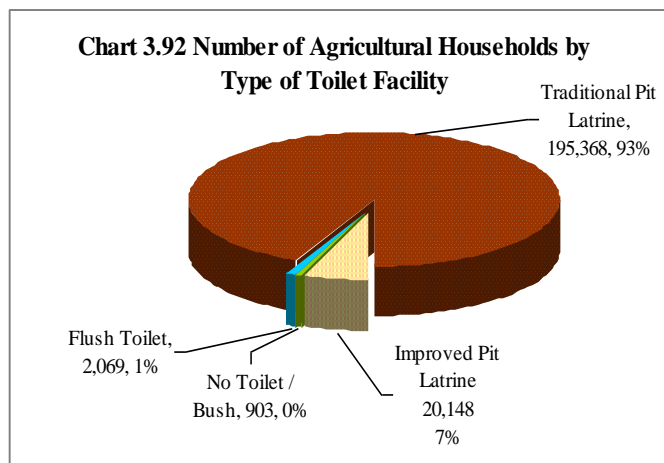


3.14 Poverty Indicators

The agricultural census collected some data on poverty for the purpose of providing a base for tracking progress in poverty reduction strategies undertaken by the government.

3.14.1 Type of Toilets

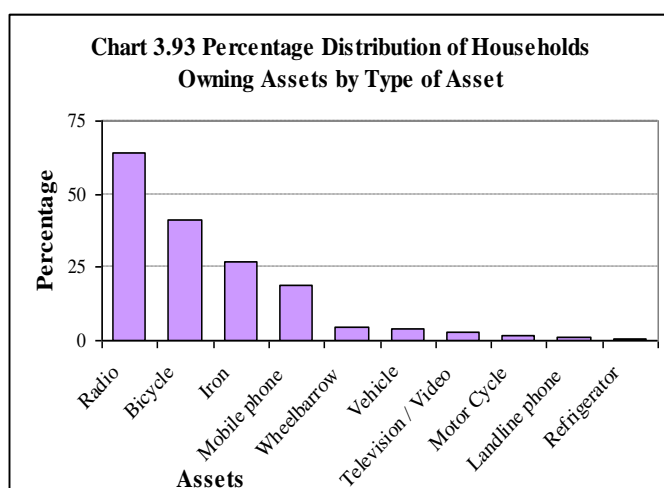
A large number of rural agricultural households use traditional pit latrines (195,368 households, 93% of all rural agricultural households). 20,148 households (7%) had improved pit latrine and 2,069 households (1%) use flush toilets. However, 903 households (0.4%) had no toilet facilities (Chart 3.92).



The distribution of the households without toilets within the region indicates that 29 percent of them were found in Namtumbo, 29% in Tunduru District, 23% in Mbinga, and 10% in Songea Urban. Among the districts Songea Rural had fewer households without toilet facilities (81 households, 9%).

3.14.2 Household's Assets

Radios were owned by most of the households (64% of the total households) in the region. This was followed by

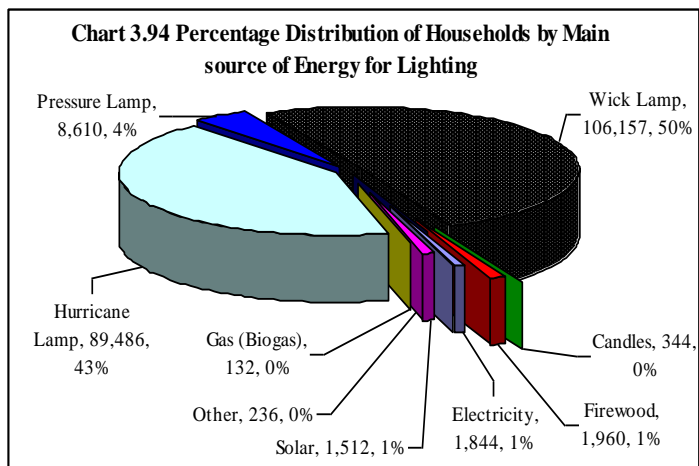


bicycles 41%, iron 27%, mobile phones 19% and wheelbarrow 5%. Other asset like land line telephones, vehicles, motor cycles, television/videos, refrigerators were each owned by less than 5% of the total households (Chart 3.93)

Mbinga district was leading the other districts in the number of households owning the four popular assets of radio, bicycle, iron and mobile phone. In all the districts the pattern of priority of owning is similar. More households prefer owning radio followed by bicycle then iron before owning mobile phone. Comparatively Songea Rural is leading by having 76% of the households owning radios, followed by Namtumbo 71% then Songea Urban 69%. Mbinga had 65% and Tunduru had 51%. On the other hand Songea Urban households were leading in owning Mobile phones followed by Songea rural district.

3.14.3 Sources of Lighting Energy

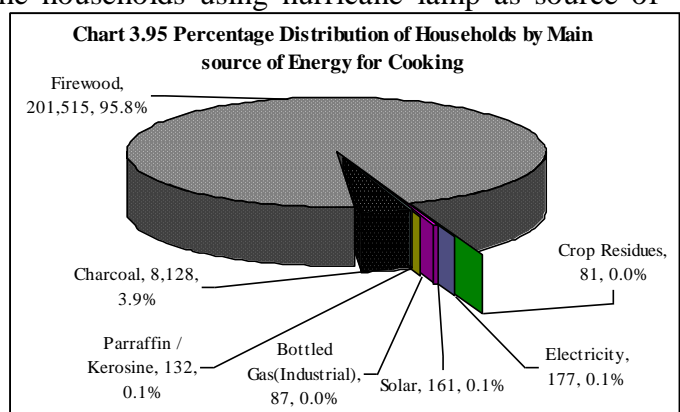
Main sources of lighting energy in Ruvuma are predominantly wick lamp with large numbers of households using it (50%) and, hurricane lamp (43%). This was followed by pressure lamp (4%), fire wood, electricity and solar each with less than 2% of the total households using them. Less common sources of lighting energy are gas/biogas (0.1%), candles (0.2%) and other smaller sources (0.1%), (Chart 3.94).



Comparatively across districts, Mbinga has the smallest percent (40%) of households using wick lamp as the source of lighting energy and Tunduru district has the largest percent (70%). Mbinga was leading with 55% and Tunduru 20% of the households using hurricane lamp as source of lighting energy. The other districts had percentages in-between Mbinga and Tunduru districts.

3.14.4 Sources of Energy for Cooking

The most prominent source of energy for cooking was firewood which was used by

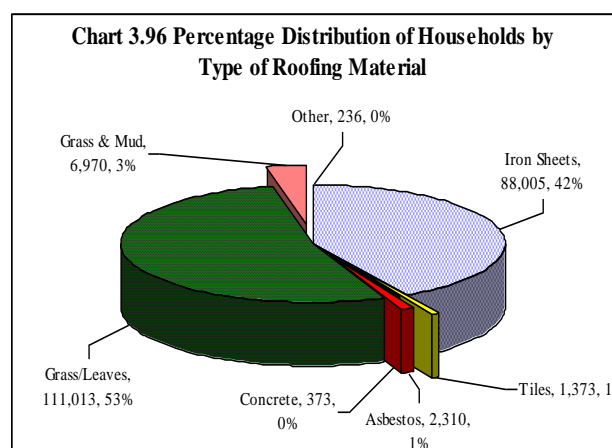


95.8% of the total number of households in the region. Firewood was followed by charcoal as a source of energy for cooking which was used by 3.9 percent of the households. Other sources were electricity, solar and paraffin/kerosene used by 0.1% of the households each. In negligible amounts crop residues and gas/industrial were also used (Chart 3.95).

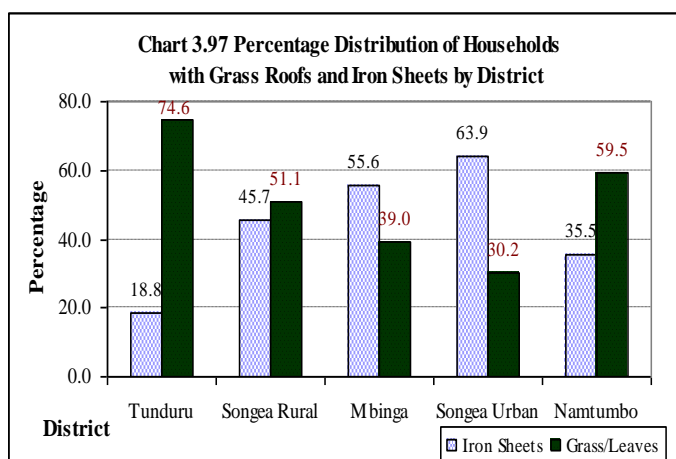
The percentages of the district households who use firewood as the main source of energy for cooking are very high. They all range between 84% in Songea Urban to 99% in Songea Rural.

3.14.5 Roofing Material

The most common roofing material was grass/leaves accounting for 53 percent (111,013 households) of the total number of agricultural households in the region. This was followed by iron sheets (42%, 88,005 households). Least common were roofing materials like concrete 373 households, tiles 1,373 households, asbestos 2,310 households and grass& mud 6,970 households.



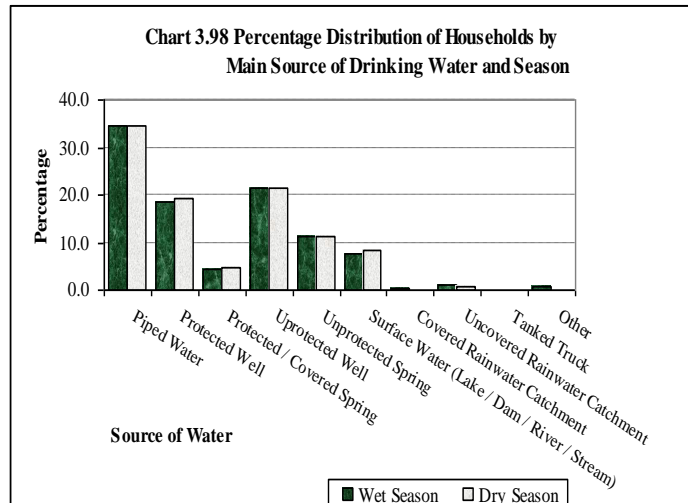
Tunduru district had the largest number of households (39,744 households, 75%) using leaves or grass for roofing materials while the smallest number was recorded in Songea urban district (2,289 households, 30%).



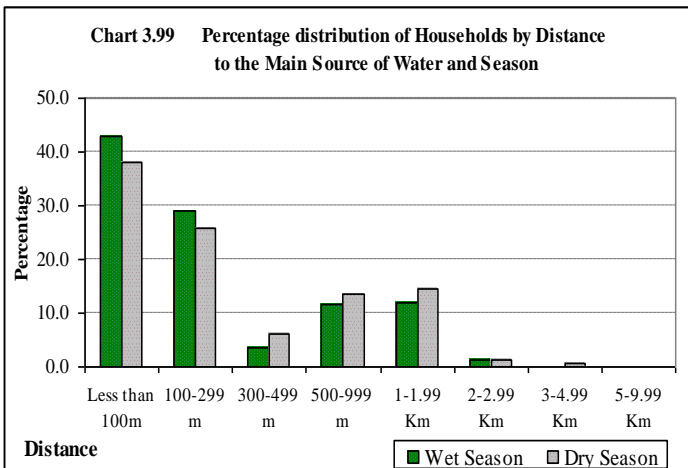
However, Songea Urban had the highest percent of households using iron sheets as roofing material (30%) followed by Mbinga district (39%). Tunduru district had the highest percent of households with leaves/grass roofing (75%) followed by Nantumbo district (59%), (Chart 3.97).

3.14.6 Access to Drinking Water

The main source of drinking water for agricultural households in Ruvuma region was piped water (34.7% of agricultural households during wet season and 34.4% during dry season). This is followed by unprotected wells (21.5% of households during wet and dry seasons), protected wells (18.5% of households during wet season and 19.1% of households during dry season) and unprotected spring (11.2 % during wet season and 11.4% during dry season). Other sources which accounted for less than 10 percent each for each season were, surface water (river, dams and streams), protected covered spring, covered rainwater catchments and uncovered rainwater catchments, (Chart 3.98).



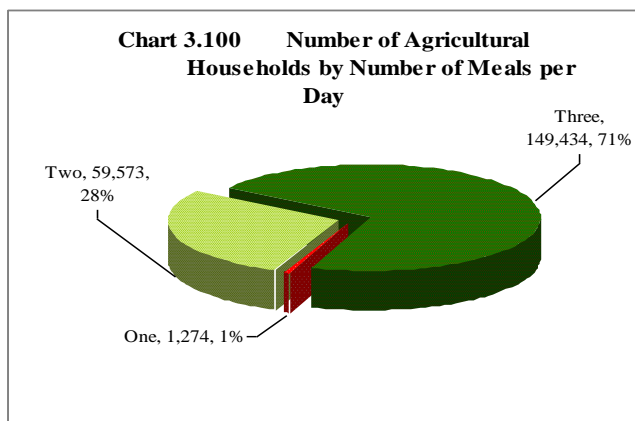
There were variations in terms of distance to the main source of water between the dry and wet season. About 72 percent of the households obtained water from a distance less than 300 meters during the wet season compared to 64 percent during the dry season. In both seasons the percentage of household obtaining water from a distance between 300 meters and 499 meters is almost the same. Fewer household got water from a distance of 2 km and above in both seasons. The most common distance from the source of drinking water was between 100 and 300 meters, (Chart 3. 99).



3.14.7 Food Consumption Pattern

3.14.7.1 Number of Meals per Day

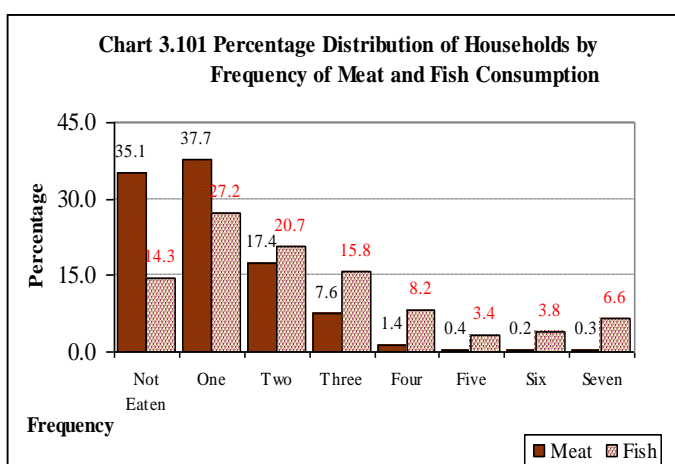
The majority of households in Ruvuma region normally have 3 meals per day (71 percent of the households in the region). This is followed by 2 meals per day (28 percent) and 1 meal per day (0.6 percent), (Chart 3.100).



Songea Urban district had the highest percentage of households eating one meal per day while Namtumbo had the least.

3.14.7.2 Meat Consumption Frequencies

The number of agricultural households that consumed meat during the week preceding the census was 136,542 (65% of the agricultural households in Ruvuma region) with 79,246 households (37.7% of the agricultural households in the region) consuming meat only once during the respective week. This was followed by those who had meat twice during the week (17.4%). Very few households (9.9%) had meat three or more times during the respective census week. About 35 percent of the agricultural households in Ruvuma region did not eat meat during the week preceding the census, (Chart 3.101).



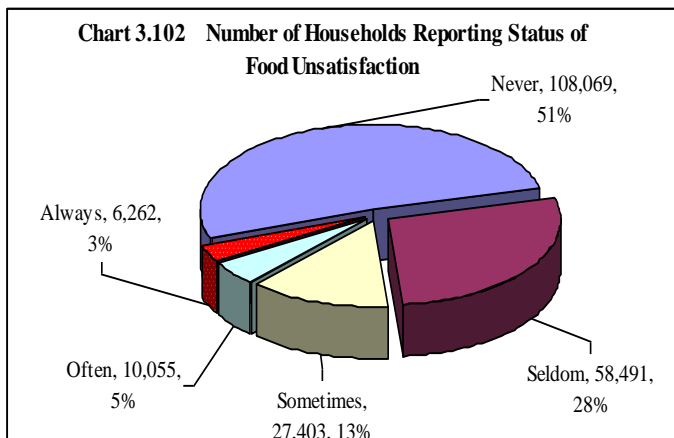
3.14.7.3 Fish Consumption Frequencies

The number of agricultural households that consumed fish during the week preceding the census was 180,153 (85.7% of the total agricultural households in Ruvuma region) with 57,167 households (27.2 % of the households) consuming fish once during the respective week. This was followed by those who had fish two times (20.1%) and three times (15.8%). In general, the percentage of households that consumed fish more than three times during the week in Ruvuma region was small (46,204 hh, 22% of the agricultural households in the region). About 14.3 percent of the

agricultural households in Ruvuma region did not eat fish during the week preceding the census, (Chart 3.101).

3.14.8 Food Security

In Ruvuma region 58,491 households (27.8% of agricultural households) said they seldom experienced problem in satisfying the household food requirements. However 27,403 (13%) said they sometimes experienced problems. 4.8 percent often experienced problems and 3.0 percent always had problems in satisfying the household food requirements. About 51.4



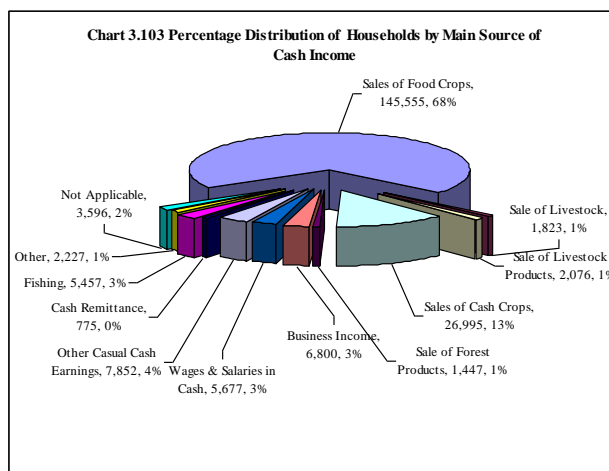
percent of the agricultural households said they never experienced any food sufficiency problems, (Chart 3.102).

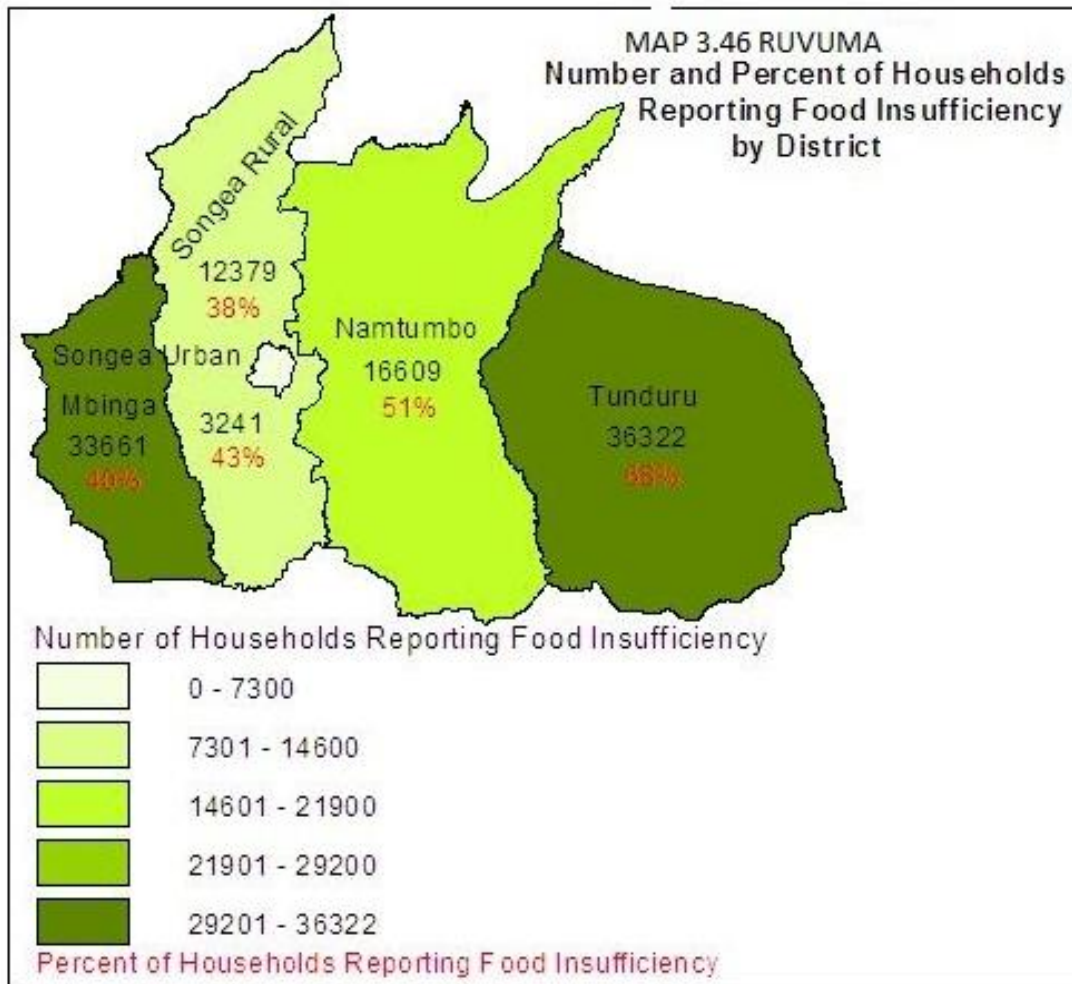
Comperatively, there were higher percentages of households who reported to have insufficient foods in Songea Rural district (62%), Mbinga district (60%) and Songea Urban district (57%). About half (49%) of the households in Namtumbo district reported to have never unsatisfied with food requirement in the district. Tunduru had more household that were food unsecured (68%), (Map 3.54).

3.14.9 Main Source of Cash Income

The main source of cash income for the Households of Ruvuma region was from sale of food crops (69% of the agricultural households in the region). This was followed by sale of cash crops (13%), other casual cash earnings (4%), business income, fishing, and wages and salaries had 3 percent each.

Other sources which were reported by households as their main source of cash income but accounting for less than 3 percent were sale of livestock, sale of forest products, sale of livestock products, cash remittance and other sources, (Chart 3.103)





4 RUVUMA PROFILES

This section presents the status of crops and livestock production, access to natural resources and services, demography and poverty for both the region as a whole and for each district.

4.1 Ruvuma Region Profile

Ruvuma had a land area of 575,000 hectares under crop production. Although it had a moderate number of crop farming households compared to other regions, it had one of the lowest number of crop growing households per square kilometre. The available land area per household is 4.1 hectares. Of the total available land in the region, it had one of the lowest land utilisation percentages in Tanzania and this is reflected by the lowest number of households responding to insufficient land. Compared to other regions, the average planted area of annual crops per household was above national average.

Cereal production in the region was moderate and it was mostly maize and paddy production. Sweet potatoes were an important crop in the region and the planted area of tobacco was the second largest in the country. Beans and groundnuts were produced in moderate to low quantities.

Ruvuma was the second most important region for the production of cashew nuts, fourth for coffee. Pigeon peas were also grown in the region. The region had a small but moderate level of irrigation compared to other regions. There was a slight change in the number of households using irrigation for a period of 10 years. The main source of water for irrigation was rivers and the method of obtaining irrigation water was mostly by buckets/watering cans, closely followed by gravity. buckets/watering cans were also the most common methods of applying irrigation water.

Practically all land was cultivated by hand. Almost 50 percent of the planted area in Ruvuma was applied with fertilisers and it had the highest percent of inorganic fertiliser application in the country. It had a low to moderate application of pesticides compared to other regions in the country.

Most crop storage was in sacks/open drums and this was closely followed by locally made traditional structures. The region has the highest percent of households selling crops in the country. The number of households receiving extension is moderate to low. The number of households with erosion control/water harvesting structures was low; however, it had a moderate number of terraces compared to other regions.

4.2 District Profiles

The following district profiles highlight the characteristics of each district and compares them in relation to population, main crops and livestock, production and productivity, access to services and resources and levels of poverty.

4.2.1 Mbinga

Mbinga district had the largest number of agricultural households in the region compared to other districts in the region. It has the largest number of household involved in crop farming, livestock keeping and fishing. The most important livelihood activity for smallholder households in Mbinga district is annual crop farming, followed by permanent crop farming. Mbinga has the third highest literacy rate (82.7%) among smallholder households and the first in terms of percentage of household member over five years who have completed school. The district has the highest average land area utilized per household (1.7ha) and largest area planted with annual crops (83,636 ha). However, it ranked fourth in terms of area planted per household (0.26ha). Mbinga has the largest area planted with cereals and is the most important district in the region for maize production with a planted area of 70,833 ha and the planted area per household of 0.78 hectares. It ranked third in terms of paddy production with planted area of 6,317 ha.

The district had the largest planted area of sweet potatoes accounting for 58 percent of the sweet potatoes planted area in the region. The district also had the largest planted area of beans (24,405 ha) and the largest bean planted area per household (0.52 ha). Groundnut production was not important in the district (11% of total groundnut production) but, the district ranked second in terms of simsim production and second in area planted with tomatoes in the district. Mbinga has the second highest area planted with permanent crops (39,151 ha, 39%) and this is dominated by coffee (99%). Bananas were also grown (4,461 ha) and other permanent crops are either not grown or are grown in small quantities. The district was third in terms of use of improved seeds (22.6%), fertilizer (23,566 ha), but ranked first in use of organic fertilizer and was the first in term of use of insecticides and pesticides. Use of irrigation was moderate and the district had the highest number of households storing crops (73,104) but ranked fifth in terms of household selling crops. Access to crop extension was moderate (49% of the household) and credits were available from more than one sources except cooperatives and NGOs.

The district has the largest number of cattle in the region (61,768 heads, 82% of total number of cattle in the region). It ranked second in number of dairy cattle (3,511). It has the largest number of

goat (179,870, 52%), sheep (10,532, 51%), pigs (138,568, 76%) and chickens (715,763, 42%) compared to other districts in the region. Mbinga had the highest percent of households reporting ticks problem and household deworming livestock.

Mbinga district has a moderate percent of households with no toilet and ranked third after Tunduru and Namtumbo. The district was food secure and most household reported having three meals per day.

4.2.2 Songea Rural

Songea Rural district had the third largest number of agricultural households in the region compared to other districts in the region. The most important livelihood activity for smallholder households Songea Rural district is annual crop farming, followed by permanent crop farming and off farm income. It ranked second in terms of literacy rate (84.1%) but with fewer household members who have completed school (29,318).

It has a moderate utilized land area per household (0.79 ha) and only 50 percent of the allocated area is currently being utilized. The district has the third largest planted area in the region. The district was fourth in terms of area planted with annual crops and the average area planted per household was 0.33 ha. The district is moderately important for maize production in the region with a planted area of 29,283 hectares, however the planted area per household is high for the region (0.9 ha). Paddy production is low to moderate with a planted area of 5,116 hectares.

Songea Rural had a planted area of 468 (12%) hectares under sweet potatoes (third highest in the region) and the production was 1,150 tonnes. The production of cassava was small. The district had a small planted area of groundnuts 92,198 ha, 20%). It was second in terms of area planted with bean (7,270 ha, 19%) and area planted with beans per household. The district is one of the least important for vegetable production and the most important are tomatoes (20% of total tomato production), cabbage and onions.

Compared to other districts in the region, Songea Rural has a small to moderate area with permanent crops (5,441). It was not important for production of cashewnut and coffee and had moderate area with pigeon peas. The dominant permanent crop was banana and the district ranked third with a total planted area of 1,289 ha (18.9%).

The district has a moderate planted area with fertilizers (Farm yard manure, compost and inorganic fertilizer and most of this is inorganic fertilizer and it ranked second out of the five districts. Compared to other districts in the region, Songea Rural district has the third largest area planted with fungicide and second in terms of area planted with insecticides. It has the smallest area with irrigation compared to other districts with 1,410 ha of irrigated land after Songea Urban. Gravity was the commonest method of obtaining irrigation water. There were moderate number of households storing food (32,820, 17%) and those selling crops (29,888hh) Agricultural credits were mainly from NGOs /Development projects (48%), Cooperatives (26%) and SACCOS (16%)

Though there were fewer household receiving extension advice, percentage wise, the district ranked third with 68% of the household accessing extension services. The district had the highest number of household with erosion control/water harvesting facilities in the region.

The district was second in terms of number of cattle (17,509, 23%), goats (72,317, 21%) pigs (29,807) and chicken (364,356). Sheep were relatively few. Songea Rural district is second highest in terms of number of household reporting tick problems. It has the second largest number of households practicing fish farming (579).

Most of the household (>80%) got their drinking water from a distance less than 500 during the dry season. However, it had the lowest proportion of household without toilets. The district had the second lowest percent of households that did not eat meat or fish during the week prior to enumeration and it has a low to moderate percent of households that always had problems with food satisfaction.

4.2.3 Namtumbo

Namtumbo district has the fourth highest number of households in the region involved in smallholder's agriculture. The most important livelihood activity for smallholder households in Namtumbo district is Annual Crop Farming followed by permanent crop farming, livestock keeping and off-farm Income. Namtumbo has the second lowest literacy rate among smallholder households in the region with a literacy rate of (83.5%) with about 28,673 household members who have completed school. The percent land utilization was about 60% with 0.62 ha planted per household.

I was the third in terms of land planted with annual crops and second for cereals (2,454 ha). The area planted with maize was 21,033 ha (0.88 ha per household). It occupied the second position with regard to paddy production and has a total planted area of 7,676 ha. The production of sweet potatoes was 379 tonnes and the planted area per household was 0.3 ha. Other root and tuber crops were grown in small quantities.

The district had the third largest planted area with bean and a total of 5,656 ha were planted in 2007/08 agricultural year. The production of groundnuts was the highest in the district and a total of 7,561 tonnes were harvested from 3,263 ha. The district also ranked first in simsim production.

Vegetable production is not very important, though production of cabbages were moderately high (102, ha). However tobacco is an important cash crop in the district with a planted area of 7,393 ha. Coffee is not grown in the district and pigeon pea was the dominant permanent crop.

The district has the largest planted area with fertilizer and use of improved seeds and it ranked second among the five districts. However, the district has large percent of its planted area applied with insecticides and herbicides (1,339 ha). The district ranked highest in terms of area under irrigation (3,392 ha, 36%) and the main method used was gravity and hand bucket. A total of 30,858 household sold crop, this represent 94% of the total crop growing household in the district. Access to extension service was moderate (62% of the household).

The district has the third smallest number of cattle in the region (6,993) and they are mostly indigenous. It has the third highest number of goats and second highest number of sheep. Pig production was low and chicken population was moderate (208,313). A moderate number of households reported Tsetse and tick problems in the district.

In Namtumbo district about 40% of the household obtained water from a distance less than 500 m during the dry season. It has the highest percent of households with no toilet facilities (29%). The most common source of drinking water is piped water. It has a moderate percent of households having two or one meal per day compared to other districts and is among the districts with a high percent of households with 3 meals per day. Most households in the district never have problems with food satisfaction.

4.2.4 Songea Urban

Songea Urban district had the lowest number of households in the region and the third lowest percent of households in the district that were involved in smallholder agriculture compared to other districts in the region. The most important livelihood activity for smallholder households in Songea Urban district is annual crop farming followed off farm income and permanent crop farming. The district has the highest literacy rate among smallholder households in the region (87.3%) and this is reflected by the lowest percent of household members that have never attended schools in the region. It has the smallest utilized land area per household and 76 percent of the allocated land area was utilized. The total planted area was very low compared to other districts in the region and it had the smallest planted area per household (0.05 ha).

Maize production is the most important crop in the district with a planted area of (4,779 ha,) and a planted area per household of 0.64 ha. However, the area planted is the lowest in the region. Paddy production is not important in the district and other cereals were either not grown or were grown in very small quantities. The district was second in terms of sweet potatoes production (1,553 tonnes). Other roots and tubers crops are grown on a small scale. Beans, groundnuts, simsim, vegetables and other crops were grown in small areas.

Use of improved seeds, fertilizers and irrigation were second lowest after Tunduru. There were also few household storing or selling crops. The number of household receiving crop extension advice was very low. Compared to other districts in the region, Songea Urban district has the smallest percent of its planted area with insecticide, a comparatively moderate percent with herbicides and a low percent with fungicides. It has one of the smallest areas of irrigation in the region. The most common method of obtaining and applying water is by hand buckets/ Bucket. Songea Urban has the smallest number of cattle, sheep, goats, pigs and chicken in the region and most of them are indigenous.

Incidence of ticks and tse tse fly were comparable to those of Mbinga and Songea Rural. The most common source of drinking water is piped water, though only 55% of household could access water in a distance less than 500 m during the dry season. Most of the household had three meals per day and most households never or seldom have problems with food satisfaction.

4.2.5 Tunduru

Tunduru district had the second largest number of agricultural households in the region involved in smallholder agriculture compared to other districts in the region. Most smallholders are involved in crop farming only, followed by crop and livestock. It had very few livestock only households. The most important livelihood activity for smallholder households in Tunduru district is annual crop farming, followed by permanent crop farming, then off farm income. Tunduru has a comparatively low literacy rate among smallholder households (66%) and this is reflected by the high percent of household members that have not attended school. The literacy rate for the heads of household was also lowest in the region.

The district has the second largest area planted per household and had the highest percent of land utilized (82%) indicating a higher level of land pressure. Compared to other districts in the region, Tunduru had a moderate production of maize with a planted area of 32,248 hectares; however, the planted area per household is the lowest in the region. Tunduru is very important for paddy production compared to other districts in the region with planted area of 28,691 hectares which is almost three times more than the other districts in the region. It has also the largest planted area per household compared to other districts in the region. A small area was planted with other cereals (2,150 ha, 17%). It was the fourth in terms of sweet potato production but ranked last in beans production.

Compared to other district Tunduru had the largest area planted with groundnuts (4,444 ha). Vegetable production was moderately. The district also had the largest area planted with permanent crops and cashewnut was the dominant crop (96%).

Use of improved seeds was lowest in the region whilst the district ranked third in terms of use of agrochemicals. The district has one of the lowest planted areas with fertilizers however, of the small area with fertilizer most was with inorganic fertilizer. The district had the second lowest area under irrigation around 1,410 ha of irrigated land.

Although very small, access to credit in the district, NGOs and Development projects were the main source. However, the district ranked second in terms of number of household receiving extension services. Erosion control was mainly through use of tree belts and drainage ditches. And water harvesting bunds.

Tunduru district has a small number of cattle (5,790 head) and ranked second from bottom after Songea Urban and there were about 1,800 dairy cattle in the district. Goat production is the second smallest compared to other districts, however it has the third largest population of sheep in the region. It has the smallest number of pigs in the region and was the third in number of chickens.

Incidence of ticks and tse tse fly were moderate (10 & 5% respectively). However, it was the last in terms of household deworming livestock other than chicken. Tunduru had the least number of households practicing fish farming.

Access to drinking water was moderate and about 40 percent of household could obtain water from a distance less than 500 m during the dry season. Tunduru district has the highest percent of households with no toilet facilities (29%). The most common source of drinking water is from unprotected wells. It has the highest percent of households having three meals per day compared to other districts and one of the lowest percent with two meals per day. The district had the highest percent of households that did not eat meat or fish during the week prior to enumeration; however, most households seldom had problems with food satisfaction.

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APPENDIX II: TABLES

TYPE OF AGRICULTURE HOUSEHOLD

2.1: Number of Households by type of Household and District during 2007/08 Agriculture year

District	Rural Households involved in Agriculture	% of Total Rural Households	Rural households NOT involved in Agriculture	% of Total Rural Households	Total Rural Households	% of Total Households	Number of Urban Households	% of Total Households	Total Number of Households
Tunduru	53,299	99	279	1	53,578	89	6,899	11	60,477
Songea Rural	32,983	99	177	1	33,160	85	5,916	15	39,076
Mbinga	83,636	100	293	0	83,929	86	14,163	14	98,093
Songea Urban	7,582	91	788	9	8,370	23	28,697	77	37,067
Namtumbo	32,781	99	281	1	33,062	92	2,918	8	35,980
Total	210,281	99	1,818	1	212,099	78	58,592	22	270,691

2.2: Number of Agriculture Households by type of Holding by District during 2007/08 Agriculture year

District	Crops Only		Livestock Only		Pastoralist		Crops & Livestock		Total Number of Households	Total Number of Households Growing Crops	Total Number of Households Rearing Livestock
	Number of households	%	Number of households	%	Number of households	%	Number of households	%			
Tunduru	49,351	93	0	0	0	0	3,948	7	53,299	53,299	3,948
Songea Rural	23,617	72	0	0	0	0	9,365	28	32,983	32,983	9,365
Mbinga	43,780	52	0	0	0	0	39,856	48	83,636	83,636	39,856
Songea Urban	5,322	70	59	1	0	0	2,200	29	7,582	7,522	2,260
Namtumbo	25,526	78	0	0	0	0	7,256	22	32,781	32,781	7,256
Total	147,596	70	59	0	0	0	62,626	30	210,281	210,221	62,685

2.3: Number of Agriculture Households By Type and Size of Holding, 2007/08 Agricultural Year - RUVUMA

Size of Holding	2.1 Type of Agriculture Household									
	Crops only		Livestock only		Pastoralist		Crops and Livestock		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0.01 - 0.50	3,544	78	59	1	0	0	967	21	4,571	100
0.51 - 1.00	10,877	81	0	0	0	0	2,522	19	13,399	100
1.01 - 1.50	20,267	78	0	0	0	0	5,663	22	25,930	100
1.51 - 2.00	17,772	69	0	0	0	0	7,997	31	25,769	100
2.01 - 2.50	26,888	78	0	0	0	0	7,513	22	34,400	100
2.51 - 3.00	10,897	66	0	0	0	0	5,621	34	16,518	100
3.01 - 3.50	11,041	70	0	0	0	0	4,626	30	15,667	100
3.51 - 4.00	5,685	57	0	0	0	0	4,207	43	9,893	100
4.01 - 4.50	11,584	63	0	0	0	0	6,730	37	18,314	100
4.51 - 5.00	4,539	78	0	0	0	0	1,281	22	5,820	100
Above 5	24,502	61	0	0	0	0	15,499	39	40,000	100
Total	147,596	70	59	0	0	0	62,626	30	210,281	100

HOUSEHOLD DEMOGRAPHICS

3.1 Number of Heads of Agricultural Households by sex of head and District, 2007/08 Agricultural Year

District	Male		Female		Total
	Number	Percent	Number	Percent	
Tunduru	44,613	84	8,686	16	53,299
Songea Rural	26,793	81	6,189	19	32,983
Mbinga	70,420	84	13,217	16	83,636
Songea Urban	6,006	79	1,576	21	7,582
Namtumbo	29,547	90	3,234	10	32,781
Total	177,379	84	32,902	16	210,281

3.2: Number of Household Members classified by District and Sex

District	Male		Female		Total
	Number	Percent	Number	Percent	
Tunduru	114,494	48	123,969	52	238,463
Songea Rural	72,888	48	79,728	52	152,616
Mbinga	188,130	50	190,608	50	378,739
Songea Urban	18,167	49	18,613	51	36,779
Namtumbo	80,773	48	88,640	52	169,413
Total	474,451	49	501,559	51	976,010

3.3: Number of Agricultural Household Members By Sex and Age Group, 2007/08 Agricultural Year, Ruvuma

Age Group	Sex					
	Male		Female		Total	
	Number	%	Number	%	Number	%
Less than 4	62,322	50	61,485	50	123,807	100
5 - 9	69,620	51	73,112	49	142,732	100
10 - 14	68,803	52	73,074	48	141,876	100
15 - 19	57,513	52	55,043	48	112,556	100
20 - 24	29,706	47	39,982	53	69,688	100
25 - 29	32,413	44	42,199	56	74,612	100
30 - 34	29,175	46	35,684	54	64,859	100
35 - 39	27,517	47	32,372	53	59,890	100
40 - 44	21,549	49	19,487	51	41,036	100
45 - 49	21,664	52	21,211	48	42,876	100
50 - 54	13,078	51	12,613	49	25,691	100
55 - 59	12,652	54	9,770	46	22,422	100
60 - 64	9,111	53	9,271	47	18,382	100
65 - 69	5,599	52	6,026	48	11,625	100
70 - 74	5,449	52	4,368	48	9,817	100
75 - 79	4,141	58	2,551	42	6,692	100
80 - 84	2,236	49	1,730	51	3,966	100
Above 85	1,901	48	1,582	52	3,484	100
Total	474,451	50	501,559	50	976,010	100

3.4 Number of Heads of Agricultural Households by Marital Status, sex of head and District, 2007/08 Agricultural Year

District	Married						Not Married					
	Male		Female		Total		Male		Female		Total	
Tunduru	40,270	96	1,842	4	42,113	100	2,106	55	1,711	45	3,816	100
Songea Rural	24,432	96	1,140	4	25,572	100	1,222	36	2,199	64	3,420	100
Mbinga	62,779	94	4,130	6	66,909	100	2,065	63	1,239	38	3,304	100
Songea Urban	5,292	96	238	4	5,530	100	119	31	268	69	387	100
Namtumbo	26,487	96	1,136	4	27,624	100	1,311	68	612	32	1,923	100
Total	159,260	95	8,487	5	167,747	100	6,822	53	6,028	47	12,851	100

Cont. 3.4 Number of Heads of Agricultural Households by Marital Status, sex of head and District, 2007/08 Agricultural Year

District	Living together						Separated					
	Male		Female		Total		Male		Female		Total	
Tunduru	790	55	658	45	1,448	100	1,053	30	2,500	70	3,553	100
Songea Rural	244	100	0	0	244	100	733	38	1,222	63	1,955	100
Mbinga	2,891	74	1,033	26	3,924	100	1,859	47	2,065	53	3,924	100
Songea Urban	446	83	89	17	535	100	89	33	178	67	268	100
Namtumbo	1,049	86	175	14	1,224	100	437	45	524	55	962	100
Total	5,420	73	1,955	27	7,375	100	4,171	39	6,490	61	10,661	100

Cont. 3.4 Number of Heads of Agricultural Households by Marital Status, sex of head and District, 2007/08 Agricultural Year

District	Widowed						Total					
	Male		Female		Total		Male		Female		Total	
Tunduru	395	17	1,974	83	2,369	100	44,613	84	8,686	16	53,299	100
Songea Rural	163	9	1,629	91	1,792	100	26,793	81	6,189	19	32,983	100
Mbinga	826	15	4,750	85	5,576	100	70,420	84	13,217	16	83,636	100
Songea Urban	59	7	803	93	862	100	6,006	79	1,576	21	7,582	100
Namtumbo	262	25	787	75	1,049	100	29,547	90	3,234	10	32,781	100
Total	1,705	15	9,942	85	11,647	100	177,379	84	32,902	16	210,281	100

3.5: Number of Agricultural Household Members By Survival of Female Parent and District , 2007/08 Agricultural Year

District	Survival of Mother							
	Yes		No		Don't know		Total	
	Number	%	Number	%	Number	%	Number	%
Tunduru	193,455	81	44,745	19	263	0.1	238,463	100
Songea Rural	125,497	82	26,793	18	326	0.2	152,616	100
Mbinga	308,319	81	70,420	19	0	0.0	378,739	100
Songea Urban	27,741	75	9,009	24	30	0.1	36,779	100
Namtumbo	140,653	83	28,760	17	0	0.0	169,413	100
Total	795,665	82	179,727	18	619	0.1	976,010	100

3.6: Number of Agricultural Household Members By Survival of Male Parent and District , 2007/08 Agricultural Year

District	Survival of Father							
	Yes		No		Don't know		Total	
	Number	%	Number	%	Number	%	Number	%
Tunduru	168,846	71	69,354	29	263	0.1	238,463	100
Songea Rural	108,721	71	41,859	27	2,036	1.3	152,616	100
Mbinga	283,331	75	93,962	25	1,446	0.4	378,739	100
Songea Urban	24,946	68	11,269	31	565	1.5	36,779	100
Namtumbo	131,824	78	36,627	22	962	0.6	169,413	100
Total	717,667	74	253,072	26	5,271	0.5	976,010	100

3.7: Number of Agriculture Household Members 5 years and above Who Can Read and Write Languages By Type of Language and District , 2007/08 Agricultural Year

District	Read & Write											
	Swahili		English		Swahili & English		Any Other Language		Don't Read / Write		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	129,891	62	1,448	1	7,633	4	263	0	70,276	34	209,511	100
Songea Rural	104,079	79	1,303	1	5,619	4	0	0	20,930	16	131,931	100
Mbinga	259,170	79	4,543	1	6,402	2	0	0	56,377	17	326,492	100
Songea Urban	25,986	81	297	1	1,546	5	30	0	4,044	13	31,903	100
Namtumbo	116,613	77	2,710	2	7,867	5	87	0	25,088	16	152,367	100
Total	635,739	75	10,301	1	29,068	3	380	0	176,715	21	852,203	100

3.8: Number of Heads of Agricultural Households by sex of head and District , 2007/08 Agricultural Year

District	Total								
	Male		%	Female		%	Total		%
Tunduru	44,613		84	8,686		16	53,299		100
Songea Rural	26,793		81	6,189		19	32,983		100
Mbinga	70,420		84	13,217		16	83,636		100
Songea Urban	6,006		79	1,576		21	7,582		100
Namtumbo	29,547		90	3,234		10	32,781		100
Total	177,379		84	32,902		16	210,281		100

3.9: Number of Agricultural Household Members reporting Literacy levels by Sex of Member and District , 2007/08 Agricultural Year

District	Male						Female						Total					
	Can Read and Write		Can not Read and Write		Total		Can Read and Write		Can not Read and Write		Total		Can Read and Write		Can not Read and Write		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	74,750	73	27,110	27	101,860	100	64,485	60	43,166	40	107,651	100	139,235	66	70,276	34	209,511	100
Songea Rural	55,134	87	8,307	13	63,441	100	55,867	82	12,623	18	68,490	100	111,001	84	20,930	16	131,931	100
Mbinga	134,231	84	24,781	16	159,012	100	135,883	81	31,596	19	167,479	100	270,115	83	56,377	17	326,492	100
Songea Urban	13,766	88	1,843	12	15,610	100	14,093	86	2,200	14	16,293	100	27,859	87	4,044	13	31,903	100
Namtumbo	62,328	86	9,878	14	72,206	100	64,950	81	15,210	19	80,161	100	127,278	84	25,088	16	152,367	100
Total	340,209	83	71,919	17	412,129	100	335,279	76	104,795	24	440,074	100	675,488	79	176,715	21	852,203	100

3.10: Number of heads of Agricultural households reporting Literacy levels by Sex of Member and District , 2007/08 Agricultural Year

District	Male						Female						Total					
	Can Read and Write		Can not Read and Write		Total		Can Read and Write		Can not Read and Write		Total		Can Read and Write		Can not Read and Write		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	34,217	77	10,397	23	44,613	100	3,816	44	4,869	56	8,686	100	38,033	71	15,266	29	53,299	100
Songea Rural	24,757	92	2,036	8	26,793	100	5,131	83	1,059	17	6,189	100	29,888	91	3,095	9	32,983	100
Mbinga	65,051	92	5,369	8	70,420	100	10,325	78	2,891	22	13,217	100	75,376	90	8,260	10	83,636	100
Songea Urban	5,649	94	357	6	6,006	100	1,219	77	357	23	1,576	100	6,868	91	714	9	7,582	100
Namtumbo	26,487	90	3,060	10	29,547	100	2,622	81	612	19	3,234	100	29,110	89	3,671	11	32,781	100
Total	156,161	88	21,218	12	177,379	100	23,114	70	9,788	30	32,902	100	179,275	85	31,006	15	210,281	100

3.11: Number of Agricultural Household Members By Level of Formal Education Completion and District , 2007/08 Agricultural Year

District	Education Level																	
	Under Standard One		Standard One		Standard Two		Standard Three		Standard Four		Standard Five		Standard Six		Standard Seven		Standard Eight	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	0	0	1,184	1	526	1	1,711	2	8,817	10	921	1	1,448	2	62,116	73	790	1
Songea Rural	0	0	326	0	652	1	407	1	7,818	11	733	1	1,059	2	51,958	75	407	1
Mbinga	207	0	413	0	3,098	2	3,511	2	14,249	8	2,065	1	1,859	1	134,851	78	620	0
Songea Urban	30	0	238	1	268	2	297	2	2,289	14	208	1	178	1	12,309	73	89	1
Namtumbo	87	0	612	1	350	0	699	1	5,682	7	612	1	699	1	66,436	83	262	0
Total	324	0	2,773	1	4,893	1	6,625	2	38,856	9	4,539	1	5,243	1	327,671	77	2,168	1

Cont..3.11: Number of Agricultural Household Members By Level of Formal Education Completion and District , 2007/08 Agricultural Year

District	Education Level																	
	Training After Primary Education		Pre Form One		Form One		Form Two		Form Three		Form Four		Form Five		Form Six		Training After Secondary Education	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	526	1	263	0	658	1	658	1	395	0	2,632	3	0	0	395	0	263	0
Songea Rural	652	1	326	0	163	0	814	1	326	0	1,873	3	0	0	163	0	163	0
Mbinga	620	0	413	0	1,033	1	2,685	2	620	0	3,924	2	207	0	413	0	1,033	1
Songea Urban	89	1	0	0	30	0	30	0	0	0	505	3	0	0	59	0	149	1
Namtumbo	524	1	0	0	350	0	350	0	87	0	2,098	3	0	0	0	0	350	0
Total	2,411	1	1,002	0	2,233	1	4,536	1	1,428	0	11,032	3	207	0	1,030	0	1,957	0

Cont ..3.11: Number of Agricultural Household Members By Level of Formal Education Completion and District , 2007/08 Agricultural Year

District	Education Level							
	University & Other Tertiary Education		Adult Education		Not applicable		Total	
	Number	%	Number	%	Number	%	Number	%
Tunduru	132	0	1,711	2	395	0	85,541	100
Songea Rural	0	0	1,629	2	244	0	69,711	100
Mbinga	0	0	413	0	0	0	172,229	100
Songea Urban	89	1	30	0	30	0	16,918	100
Namtumbo	0	0	437	1	262	0	79,898	100
Total	221	0	4,219	1	931	0	424,298	100

3.12: Number of Heads of Agricultural Households by Education Status, sex of head and District, 2007/08 Agricultural Year

District	Attending School						Completed					
	Male		Female		Total		Male		Female		Total	
Tunduru	395	100	0	0	395	100	33,953	89	4,080	11	38,033	100
Songea Rural	489	100	0	0	489	100	24,269	83	5,049	17	29,318	100
Mbinga	1,859	90	207	10	2,065	100	63,812	86	10,532	14	74,343	100
Songea Urban	149	100	0	0	149	100	5,530	81	1,279	19	6,809	100
Namtumbo	699	100	0	0	699	100	26,050	91	2,622	9	28,673	100
Total	3,590	95	207	5	3,797	100	153,614	87	23,562	13	177,176	100

Cont..3.12 Number of Heads of Agricultural Households by Education Status, sex of head and District, 2007/08 Agricultural Year

District	Never Attended to School						Total					
	Male		Female		Total		Male		Female		Total	
Tunduru	10,265	69	4,606	31	14,871	100	44,613	84	8,686	16	53,299	100
Songea Rural	2,036	64	1,140	36	3,176	100	26,793	81	6,189	19	32,983	100
Mbinga	4,750	66	2,478	34	7,228	100	70,420	84	13,217	16	83,636	100
Songea Urban	327	52	297	48	624	100	6,006	79	1,576	21	7,582	100
Namtumbo	2,797	82	612	18	3,409	100	29,547	90	3,234	10	32,781	100
Total	20,175	69	9,134	31	29,309	100	177,379	84	32,902	16	210,281	100

3.13: Number of Agricultural Household Members By Level of involvement in Farming Activity and District , 2007/08 Agricultural Year

District	Involvement in Farming									
	Works Full-time on Farm		Works Part-time on Farm		Rarely Works on Farm		Never Works on Farm		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	110,677	53	6,975	3	24,610	12	67,249	32	209,511	100
Songea Rural	71,340	54	2,199	2	29,888	23	28,504	22	131,931	100
Mbinga	183,794	56	11,152	3	49,356	15	82,191	25	326,492	100
Songea Urban	13,826	43	1,933	6	5,471	17	10,674	33	31,903	100
Namtumbo	82,434	54	3,497	2	34,617	23	31,820	21	152,367	100
Total	462,071	54	25,755	3	143,941	17	220,437	26	852,203	100

3.14: Number of Agricultural Household Members By Main Activity and District, 2007/08 Agricultural Year

District	Main Activity									
	Crop/Seaweed Farming		Livestock Keeping / Herding		Livestock Pastoralist		Fishing		Fish Farming	
	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	115,547	53	0	1	0	0	0	0	0	0
Songea Rural	71,666	35	326	12	163	1	81	0	0	0
Mbinga	183,587	41	826	1	0	0	1,859	0	0	0
Songea Urban	14,361	46	238	2	30	0	0	0	0	0
Namtumbo	85,668	54	437	1	0	0	262	0	0	0
Total	470,829	46	1,827	1	193	0	2,202	2	0	0

Cont 3.14: Number of Agricultural Household Members By Main Activity and District, 2007/08 Agricultural Year

District	Main Activity									
	Government / Parastatal		Private - NGO / Mission / etc		Self Employed (Non Farming) with Employees		Self Employed (Non Farming) without Employees		Unpaid Family Helper (Non Agriculture)	
	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	1,842	0	1,579	0	921	1	1,316	1	921	0
Songea Rural	1,140	1	652	2	733	1	326	1	407	1
Mbinga	1,446	2	826	3	207	2	413	2	1,446	0
Songea Urban	476	1	505	1	565	1	268	1	327	0
Namtumbo	699	0	699	0	612	1	262	0	87	1
Total	5,603	0	4,262	1	3,038	1	2,585	1	3,188	1

Cont 3.14 HOUSEHOLDS DEMOGRAPHYS: Number of Agricultural Household Members By Main Activity and District, 2007/08 Agricultural Year

District	Main Activity													
	Not Working & Available		Not Working & Unavailable		Housemaker / Housewife		Student		Unable to Work / Too Old / Retired / Sick / Disabled		Other		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	790	0	790	0	921	0	64,353	31	20,135	10	395	0	209,511	100
Songea Rural	81	0	326	0	326	0	44,303	34	11,320	9	81	0	131,931	100
Mbinga	207	0	413	0	207	0	113,374	35	21,477	7	207	0	326,492	100
Songea Urban	238	1	89	0	476	1	12,517	39	1,754	5	59	0	31,903	100
Namtumbo	437	0	874	1	262	0	52,799	35	9,091	6	175	0	152,367	100
Total	1,753	0	2,492	0	2,191	0	287,347	34	63,778	7	917	0	852,203	100

LAND OWNERSHIP AND LAND USE

4.1: Number of Farming households by type of land Ownership/Tenure and District for the 2007/08 agriculture year

District	Land ownership/tenure														Total number of households
	Leased / Certificate of Ownership		Owned under Customary Law		Bought		Rented		Borrowed		Households with area Share - cropped		Households with area under Other forms of Tenure		
	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	No of Households	%	
Tunduru	658	1.2	49,482	92.8	3,685	6.9	658	1.2	2,895	5.4	263	0.5	1,711	3.2	53,299
Songea Rural	3,420	10.4	28,341	85.9	2,850	8.6	2,036	6.2	1,547	4.7	81	0.2	1,140	3.5	32,983
Mbinga	4,750	5.7	73,104	87.4	19,618	23.5	6,815	8.1	5,576	6.7	207	0.2	413	0.5	83,636
Songea Urban	922	12.2	5,947	78.4	1,219	16.1	476	6.3	565	7.5	59	0.8	119	1.6	7,582
Namtumbo	350	1.1	31,208	95.2	1,661	5.1	612	1.9	2,098	6.4	262	0.8	787	2.4	32,781
Total	10,100	4.8	188,082	89.4	29,034	13.8	10,596	5.0	12,681	6.0	873	0.4	4,170	2.0	210,281

4.2: Area of land (ha) by Ownership/Tenure and District for the 2007/08 agriculture year

District	Land Ownership/Tenure							Total area
	Area leased / Certificate of Ownership	Area owned under Customary Law	Area Bought	Area rented	Area Borrowed	Area Share - cropped	Area under Other forms of Tenure	
Tunduru	1,172	175,679	8,847	799	2,244	1,146	2,224	192,112
Songea Rural	18,876	123,490	4,344	1,747	1,767	99	4,352	154,676
Mbinga	21,236	193,258	43,869	6,354	2,917	125	125	267,885
Songea Urban	1,303	11,737	2,251	376	283	36	90	16,076
Namtumbo	1,345	142,488	3,566	681	2,745	283	1,857	152,965
Total	43,932	646,652	62,876	9,958	9,956	1,689	8,650	783,713
%	5.6	82.5	8.0	1.3	1.3	0.2	1.1	100.0

4.3: Number of Agricultural Households by Whether All Land Available to the Household Was Used and District , 2007/08 Agricultural Year

District	Was all Land Available to the Hh Used During 2007/08?				
	Yes	%	No	%	Total
Tunduru	31,321	35	21,978	18	53,299
Songea Rural	6,841	8	26,142	22	32,983
Mbinga	38,204	43	45,432	38	83,636
Songea Urban	4,133	5	3,449	3	7,582
Namtumbo	9,354	10	23,428	19	32,781
Total	89,853	100	120,428	100	210,281

4.4: Number of Agricultural Households by Whether they Consider Having Sufficient Land for the Household and District , 2007/08 Agricultural Year

District	Do you Consider that you have sufficient land for the Hh?				
	Yes	%	No	%	Total
Tunduru	29,479	27	23,820	24	53,299
Songea Rural	23,536	21	9,447	9	32,983
Mbinga	33,248	30	50,388	50	83,636
Songea Urban	3,062	3	4,519	5	7,582
Namtumbo	20,718	19	12,063	12	32,781
Total	110,043	100	100,238	100	210,281

4.5: Number of Agricultural Households by whether Female Members of the Household Own or Have Customary Right to Land and District , 2007/08 Agricultural Year

District	Do any Female Members of the Hh own or have customary right to Land				
	Yes	%	No	%	Total
Tunduru	8,817	17	44,482	83	53,299
Songea Rural	11,320	34	21,663	66	32,983
Mbinga	25,194	30	58,442	70	83,636
Songea Urban	2,200	29	5,382	71	7,582
Namtumbo	18,008	55	14,773	45	32,781
Total	65,539	31	144,741	69	210,281

4.6: Number of Agricultural Households By Type of Land Use and District , 2007/08 Agricultural Year												
District	Type of land use											
	Households with Area under Temporary Mono Crops	Households with Area under Temporary Mixed Crops	Households with Area under Permanent Mono Crops	Households with Area under Permanent Mixed Crops	Households with Area under Permanent / Annual Mix	Households with Area under Pasture	Households with Area under Fallow	Households with Area under Natural Bush	Households with Area under Planted Trees	Households with Area Rented to Others	Households with Area Unusable	Households with Area of Uncultivated Usable Land
Tunduru	43,187	23,100	51,026	4,540	35,014	.	28,545	3,423	80	882	240	2,075
Songea Rural	42,982	10,885	3,771	1,528	6,627	6,598	29,792	34,394	1,970	1,690	4,008	10,431
Mbinga	100,985	11,003	28,213	9,345	10,511	1,066	66,464	26,984	2,069	3,762	1,630	5,853
Songea Urban	4,961	2,377	786	108	1,110	150	2,710	990	822	557	198	1,306
Namtumbo	46,695	17,471	2,923	1,157	5,556	4,495	18,925	18,050	2,761	1,292	4,459	29,182
Total	238,811	64,836	86,718	16,678	58,819	12,309	146,436	83,841	7,701	8,182	10,536	48,847

4.7: Area of Land by type of Land Use and District during 2007/08 Agricultural Year

District	Land use area												Total area (ha)
	Area under Temporary Mono Crops	Area under Temporary Mixed Crops	Area under Permanent Mono Crops	Area under Permanent Mixed Crops	Area under Permanent / Annual Mix	Area under Pasture	Area under Fallow	Area under Natural Bush	Area under Planted Trees	Area Rented to Others	Area Unusable	Area of Uncultivated Usable Land	
Tunduru	43,187	23,100	51,026	4,540	35,014	.	28,545	3,423	80	882	240	2,075	192,112
Songea Rural	42,982	10,885	3,771	1,528	6,627	6,598	29,792	34,394	1,970	1,690	4,008	10,431	154,676
Mbinga	100,985	11,003	28,213	9,345	10,511	1,066	66,464	26,984	2,069	3,762	1,630	5,853	267,885
Songea Urban	4,961	2,377	786	108	1,110	150	2,710	990	822	557	198	1,306	16,076
Namtumbo	46,695	17,471	2,923	1,157	5,556	4,495	18,925	18,050	2,761	1,292	4,459	29,182	152,965
Total	238,811	64,836	86,718	16,678	58,819	12,309	146,436	83,841	7,701	8,182	10,536	48,847	783,713
%	30.5	8.3	11.1	2.1	7.5	1.6	18.7	10.7	1.0	1.0	1.3	6.2	100.0

ANNUAL CROP AND VEGETABLE PRODUCTION

5.1: Planted Area by Crop and Sex of Household members owning most of the crop for the agriculture year 2007/08 Short and Long Season- Tunduru District

Crop	SHORT RAINY SEASON				LONG RAINY SEASON			
	Male		Female		Male		Female	
	No. of Hholds	Planted Area	No. of Hholds	Planted Area	No. of Hholds	Planted Area	No. of Hholds	Planted Area
Maize	263	112	0	.	39,481	28,736	7,765	3,400
Paddy	263	160	0	.	33,822	25,278	6,449	3,253
Sorghum	132	21	0	.	4,606	1,280	2,895	694
Bulrush Millet	0	.	0	.	0	.	0	.
Finger Millet	0	.	0	.	395	72	395	83
Wheat	0	.	0	.	0	.	0	.
CEREALS	658	293	0	.	78,303	55,367	17,503	7,429
Cassava	0	.	0	.	0	.	132	27
Sweet Potato	0	.	0	.	1,184	353	132	53
Irish potatoes	0	.	0	.	132	2	0	.
Yams	0	.	0	.	263	226	0	.
Coco Yam	0	.	0	.	0	.	0	.
ROOTS & TUBERS	0	.	0	.	1,579	581	263	80
Mung Bean	0	.	0	.	0	.	0	.
Beans	0	.	0	.	658	160	1,053	167
Cowpeas	0	.	0	.	8,686	1,537	8,291	1,510
Green gram	0	.	0	.	395	26	395	91
Bambaranuts	0	.	0	.	5,264	899	2,764	430
Field Peas	0	.	0	.	0	.	0	.
PULSES	0	.	0	.	15,003	2,621	12,502	2,198
Sunflower	0	.	0	.	0	.	0	.
Simsim	0	.	0	.	4,343	1,521	526	189
Groundnut	0	.	0	.	8,686	3,310	5,264	1,134
Soya Beans	0	.	0	.	0	.	0	.
Castor Fung	0	.	0	.	0	.	0	.
OIL SEEDS & OIL NUTS	0	.	0	.	13,029	4,831	5,790	1,322
Okra	0	.	0	.	0	.	0	.
Radish	0	.	0	.	132	67	0	.
Bitteer Aubergine	0	.	0	.	0	.	0	.
Onion	0	.	0	.	526	80	0	.
Ginger	0	.	0	.	0	.	0	.
Cabbage	0	.	0	.	132	1	263	20
Tomatoes	0	.	0	.	1,053	160	263	20
Spinach	0	.	0	.	263	8	132	6
Carrot	0	.	0	.	0	.	0	.
Chillies	0	.	0	.	0	.	0	.
Amaranths	0	.	0	.	263	17	263	13
Pumpkins	0	.	0	.	0	.	0	.
Egg Plant	0	.	0	.	0	.	0	.
FRUITS & VEGETABLES	0	.	0	.	2,369	332	921	60
Cotton	0	.	0	.	0	.	0	.
Tobacco	0	.	0	.	263	133	0	.
CASH CROPS	0	.	0	.	263	133	0	.
Total	658	293	0	.	110,546	63,865	36,980	11,089

5.2: Planted Area by Crop and Sex of Household members owning most of the crop for the agriculture year 2007/08 Short and Long Season- Songea District

Crop	SHORT RAINY SEASON				LONG RAINY SEASON			
	Male		Female		Male		Female	
	No. of Hholds	Planted Area	No. of Hholds	Planted Area	No. of Hholds	Planted Area	No. of Hholds	Planted Area
Maize	81	25	0	.	25,735	25,075	6,678	4,184
Paddy	0	.	81	16	9,528	4,111	2,525	989
Sorghum	0	.	0	.	163	41	0	.
Bulrush Millet	0	.	0	.	0	.	0	.
Finger Millet	0	.	81	8	5,538	2,046	2,199	784
Wheat	0	.	0	.	81	5	0	.
CEREALS	81	25	163	25	41,045	31,278	11,401	5,957
Cassava	0	.	0	.	244	107	163	41
Sweet Potato	81	16	0	.	2,117	361	407	91
Irish potatoes	0	.	0	.	81	99	81	33
Yams	0	.	0	.	0	.	0	.
Coco Yam	0	.	0	.	81	1	0	.
ROOTS & TUBERS	81	16	0	.	2,525	568	652	165
Mung Bean	0	.	0	.	0	.	0	.
Beans	0	.	0	.	12,867	5,986	3,746	1,284
Cowpeas	0	.	0	.	489	87	81	16
Green gram	0	.	0	.	0	.	0	.
Bambaranuts	0	.	0	.	489	61	81	33
Field Peas	0	.	0	.	489	106	163	18
PULSES	0	.	0	.	14,333	6,241	4,072	1,351
Sunflower	0	.	0	.	2,850	1,175	733	211
Simsim	0	.	0	.	3,420	1,723	570	231
Groundnut	0	.	0	.	4,642	1,414	2,525	783
Soya Beans	0	.	0	.	5,212	2,140	407	165
Castor Fung	0	.	0	.	81	33	0	.
OIL SEEDS & OIL NUTS	0	.	0	.	16,206	6,485	4,235	1,390
Okra	0	.	0	.	81	25	0	.
Radish	0	.	0	.	0	.	0	.
Bitteer Aubergine	0	.	0	.	81	8	0	.
Onion	0	.	0	.	489	93	81	3
Ginger	0	.	0	.	0	.	0	.
Cabbage	0	.	0	.	896	49	0	.
Tomatoes	0	.	0	.	1,547	215	81	3
Spinach	0	.	0	.	1,466	149	244	36
Carrot	0	.	0	.	0	.	0	.
Chillies	0	.	0	.	163	20	0	.
Amaranths	0	.	0	.	326	18	0	.
Pumpkins	0	.	0	.	163	7	0	.
Egg Plant	0	.	0	.	0	.	0	.
FRUITS & VEGETABLES	0	.	0	.	5,212	584	407	41
Cotton	0	.	0	.	0	.	81	16
Tobacco	0	.	0	.	407	264	0	.
CASH CROPS	0	.	0	.	407	264	81	16
Total	163	41	163	25	79,728	45,419	20,848	8,921

5.3: Planted Area by Crop and Sex of Household members owning most of the crop for the agriculture year 2007/08 Short and Long Season- Mbinga District

Crop	SHORT RAINY SEASON				LONG RAINY SEASON			
	Male		Female		Male		Female	
	No. of Hholds	Planted Area	No. of Hholds	Planted Area	No. of Hholds	Planted Area	No. of Hholds	Planted Area
Maize	0	.	0	.	55,551	44,209	15,282	10,764
Paddy	0	.	0	.	11,152	5,083	3,304	1,233
Sorghum	0	.	0	.	207	21	0	.
Bulrush Millet	0	.	0	.	0	.	0	.
Finger Millet	0	.	0	.	4,130	1,379	1,239	355
Wheat	0	.	0	.	4,130	1,697	3,304	1,028
CEREALS	0	.	0	.	75,170	52,389	23,129	13,381
Cassava	0	.	0	.	207	42	0	.
Sweet Potato	0	.	0	.	5,163	905	7,228	1,405
Irish potatoes	0	.	0	.	207	145	413	63
Yams	0	.	0	.	0	.	0	.
Coco Yam	0	.	0	.	826	125	3,098	393
ROOTS & TUBERS	0	.	0	.	6,402	1,218	10,739	1,860
Mung Bean	0	.	0	.	0	.	0	.
Beans	0	.	0	.	33,868	16,970	13,423	7,435
Cowpeas	0	.	0	.	207	251	207	84
Green gram	0	.	0	.	0	.	0	.
Bambaranuts	0	.	0	.	1,033	209	413	42
Field Peas	0	.	0	.	0	.	413	100
PULSES	0	.	0	.	35,107	17,430	14,456	7,661
Sunflower	0	.	0	.	2,478	1,003	620	134
Simsim	0	.	0	.	6,402	2,629	413	125
Groundnut	0	.	0	.	3,924	780	1,446	439
Soya Beans	0	.	0	.	2,478	1,317	620	293
Castor Fung	0	.	0	.	0	.	0	.
OIL SEEDS & OIL NUTS	0	.	0	.	15,282	5,730	3,098	991
Okra	0	.	0	.	0	.	0	.
Radish	0	.	0	.	0	.	0	.
Bitteer Aubergine	0	.	0	.	0	.	0	.
Onion	0	.	0	.	1,859	349	207	21
Ginger	0	.	0	.	0	.	0	.
Cabbage	0	.	0	.	826	114	207	8
Tomatoes	0	.	0	.	2,685	472	413	63
Spinach	0	.	0	.	2,478	347	1,239	104
Carrot	0	.	0	.	207	84	0	.
Chillies	0	.	0	.	0	.	0	.
Amaranths	0	.	0	.	0	.	413	63
Pumpkins	0	.	0	.	0	.	0	.
Egg Plant	0	.	0	.	0	.	0	.
FRUITS & VEGETABLES	0	.	0	.	8,054	1,366	2,478	258
Cotton	0	.	0	.	0	.	0	.
Tobacco	0	.	0	.	207	84	0	.
CASH CROPS	0	.	0	.	207	84	0	.
Total	0	.	0	.	140,220	78,216	53,899	24,152

5.4: Planted rea by Crop and Sex of Household members owning most of the crop for the agriculture year 2007/08 Short and Long Season- Songea Urban District

Crop	SHORT RAINY SEASON				LONG RAINY SEASON			
	Male		Female		Male		Female	
	No. of Hholds	Planted Area	No. of Hholds	Planted Area	No. of Hholds	Planted Area	No. of Hholds	Planted Area
Maize	0	.	0	.	5,590	3,731	1,843	1,047
Paddy	0	.	0	.	1,279	445	595	244
Sorghum	0	.	0	.	30	1	0	.
Bulrush Millet	0	.	0	.	0	.	0	.
Finger Millet	0	.	0	.	416	120	357	91
Wheat	0	.	0	.	30	6	0	.
CEREALS	0	.	0	.	7,344	4,304	2,795	1,383
Cassava	0	.	0	.	0	.	0	.
Sweet Potato	0	.	0	.	981	436	149	33
Irish potatoes	0	.	0	.	0	.	0	.
Yams	0	.	0	.	0	.	0	.
Coco Yam	0	.	0	.	30	6	0	.
ROOTS & TUBERS	0	.	0	.	1,011	442	149	33
Mung Bean	0	.	0	.	30	12	0	.
Beans	0	.	0	.	2,379	561	951	205
Cowpeas	0	.	0	.	59	6	59	24
Green gram	0	.	0	.	0	.	0	.
Bambaranuts	0	.	0	.	119	24	30	3
Field Peas	0	.	0	.	30	6	89	21
PULSES	0	.	0	.	2,616	609	1,130	253
Sunflower	0	.	0	.	416	88	59	16
Simsim	0	.	0	.	30	12	59	8
Groundnut	0	.	0	.	327	75	149	33
Soya Beans	0	.	0	.	59	30	30	3
Castor Fung	0	.	0	.	0	.	0	.
OIL SEEDS & OIL NUTS	0	.	0	.	833	205	297	60
Okra	0	.	0	.	119	16	30	1
Radish	0	.	0	.	30	6	0	.
Bitteer Aubergine	0	.	0	.	30	3	30	6
Onion	0	.	0	.	59	6	59	4
Ginger	0	.	0	.	0	.	0	.
Cabbage	0	.	0	.	89	10	0	.
Tomatoes	0	.	0	.	505	94	178	27
Spinach	0	.	0	.	446	36	178	11
Carrot	0	.	0	.	0	.	0	.
Chillies	0	.	0	.	0	.	30	2
Amaranths	0	.	0	.	119	13	30	1
Pumpkins	0	.	0	.	59	6	59	8
Egg Plant	0	.	0	.	0	.	30	1
FRUITS & VEGETABLES	0	.	0	.	1,457	191	624	61
Cotton	0	.	0	.	0	.	0	.
Tobacco	0	.	0	.	59	30	0	.
CASH CROPS	0	.	0	.	59	30	0	.
Total	0	.	0	.	13,320	5,781	4,995	1,789

5.5: Planted Area by Crop and Sex of Household members owning most of the crop for the agriculture year 2007/08 Short and Long Season- Namtumbo District

Crop	SHORT RAINY SEASON				LONG RAINY SEASON			
	Male		Female		Male		Female	
	No. of Hholds	Planted Area	No. of Hholds	Planted Area	No. of Hholds	Planted Area	No. of Hholds	Planted Area
Maize	87	71	0	.	27,449	24,871	4,371	3,091
Paddy	0	.	0	.	10,752	5,986	3,497	1,690
Sorghum	0	.	0	.	87	35	0	.
Bulrush Millet	0	.	0	.	0	.	87	71
Finger Millet	0	.	0	.	4,895	1,742	1,661	605
Wheat	0	.	0	.	0	.	0	.
CEREALS	87	71	0	.	43,184	32,635	9,616	5,457
Cassava	0	.	0	.	175	28	0	.
Sweet Potato	0	.	0	.	787	265	350	71
Irish potatoes	0	.	0	.	0	.	0	.
Yams	0	.	0	.	0	.	0	.
Coco Yam	0	.	0	.	0	.	0	.
ROOTS & TUBERS	0	.	0	.	962	294	350	71
Mung Bean	0	.	0	.	437	106	87	18
Beans	0	.	0	.	10,315	3,954	3,934	1,702
Cowpeas	0	.	0	.	612	113	0	.
Green gram	0	.	0	.	0	.	0	.
Bambaranuts	0	.	0	.	612	136	262	44
Field Peas	0	.	0	.	0	.	0	.
PULSES	0	.	0	.	11,976	4,310	4,283	1,764
Sunflower	0	.	0	.	3,060	1,455	787	285
Simsim	0	.	0	.	8,479	4,530	1,399	750
Groundnut	0	.	0	.	5,245	2,288	2,622	975
Soya Beans	87	71	0	.	3,671	1,973	699	354
Castor Fung	0	.	0	.	0	.	0	.
OIL SEEDS & OIL NUTS	87	71	0	.	20,455	10,246	5,507	2,364
Okra	0	.	0	.	0	.	175	53
Radish	0	.	0	.	0	.	0	.
Bitteer Aubergine	0	.	0	.	0	.	0	.
Onion	0	.	0	.	350	93	87	2
Ginger	0	.	0	.	175	71	0	.
Cabbage	0	.	0	.	524	102	0	.
Tomatoes	0	.	0	.	350	55	87	2
Spinach	0	.	0	.	699	119	350	34
Carrot	0	.	0	.	0	.	0	.
Chillies	0	.	0	.	175	159	0	.
Amaranths	0	.	0	.	699	89	175	2
Pumpkins	0	.	0	.	87	18	0	.
Egg Plant	0	.	0	.	0	.	0	.
FRUITS & VEGETABLES	0	.	0	.	3,060	705	874	94
Cotton	0	.	0	.	0	.	0	.
Tobacco	0	.	0	.	4,458	3,459	437	212
CASH CROPS	0	.	0	.	4,458	3,459	437	212
Total	175	142	0	.	84,094	51,649	21,067	9,963

5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Maize				Paddy			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	47,508	32,248	23,090	1	40,533	28,691	27,960	1
Songea Rural	32,494	29,283	65,698	2	12,134	5,116	6,606	1
Mbinga	70,833	54,973	87,478	2	14,456	6,317	8,917	1
Songea Urban	7,433	4,779	8,255	2	1,873	689	836	1
Namtumbo	31,907	28,033	52,081	2	14,249	7,676	11,355	1
Total	190,175	149,316	236,602	2	83,246	48,489	55,675	1

Cont..5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Sorghum				Bulrush Millet			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	7,633	1,995	1,050	1		.	.	.
Songea Rural	163	41	35	1	0	.	.	.
Mbinga	207	21	45	2	0	.	.	.
Songea Urban	30	1	1	0	0	.	.	.
Namtumbo	87	35	70	2	0	71	35	0
Total	8,119	2,094	1,201	1	0	71	35	0

Cont... 5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Finger Millet				Wheat			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	790	155	96	1	0	.	.	.
Songea Rural	7,818	2,838	1,812	1	81	5	5	1
Mbinga	5,369	1,734	1,661	1	7,434	2,726	1,666	1
Songea Urban	773	212	167	1	30	6	3	0
Namtumbo	6,556	2,347	1,820	1	0	.	.	.
Total	21,306	7,287	5,555	1	7,546	2,737	1,673	1

Cont ..5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Barley				Cassava			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	0	.	.	.	27,900	16,315	13,164	0.8
Songea Rural	0	.	.	.	16,695	5,645	8,363	1.5
Mbinga	0	.	.	.	42,748	27,355	64,720	2.4
Songea Urban	0	.	.	.	3,152	1,091	1,750	1.6
Namtumbo	0	.	.	.	14,424	6,457	12,120	1.9
Total	0	.	.	.	104,917	56,863	100,116	1.8

Cont ..5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Yams				Coco Yam			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	263	226	146	1	0	.	.	.
Songea Rural	0	.	.	.	81	1	1	1
Mbinga	0	.	.	.	3,924	518	503	1
Songea Urban	0	.	.	.	30	6	11	2
Namtumbo	0	.	.	.	0	.	.	.
Total	263	226	146.21	0.65	4,035	525	515	1

Cont.. 5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Sweet Potato				No of Hholds	Irish potatoes		
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)		Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	1,316	407	432	1	132	2	7	4
Songea Rural	2,606	468	1,150	2	163	132	195	1
Mbinga	12,391	2,310	3,974	2	620	208	126	1
Songea Urban	1,130	469	1,553	3	0	.	.	.
Namtumbo	1,136	336	379	1	0	.	.	.
Total	18,579	3,990	7,488	2	914	342	328	1

Cont.. 5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Mung Bean				Beans			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	0	.	.	.	1,711	327	152	0.5
Songea Rural	0	.	.	.	16,613	7,270	5,512	0.8
Mbinga	0	.	.	.	47,291	24,405	13,837	0.6
Songea Urban	0	.	.	.	3,330	766	411	0.5
Namtumbo	0	.	.	.	14,249	5,656	6,591	1.2
Total	0	.	.	.	83,194	38,424	26,502	0.7

Cont.. 5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Cowpeas				Green gram			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	16,977	3,047	1,090	0.36	790	116	40.80	0.35
Songea Rural	570	104	45	0.43	0	.	.	.
Mbinga	413	334	72	0.22	0	.	.	.
Songea Urban	119	30	10	0.35	0	.	.	.
Namtumbo	612	113	88	0.77	0	.	.	.
Total	18,691	3,628	1,305	0.36	790	116	41	0.35

Cont ..5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Chick peas				Bambaranuts			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	0	.	.	.	8,028	1,329	575	0.4
Songea Rural	0	.	.	.	570	94	48	0.5
Mbinga	0	.	.	.	1,446	251	139	0.6
Songea Urban	0	.	.	.	149	27	12	0.4
Namtumbo	0	.	.	.	874	180	154	0.9
Total	0	.	.	.	11,066	1,881	929	0.5

Cont ..5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Field Peas				Sunflower			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	0	.	.	.	0	.	.	.
Songea Rural	652	125	91	0.73	3,583	1,386	573.74	0.41
Mbinga	413	100	47	0.47	3,098	1,137	958.21	0.84
Songea Urban	119	27	27	0.99	476	104	57.00	0.55
Namtumbo	0	.	.	.	3,846	1,739	1,252.33	0.72
Total	1,183	252	166	0.66	11,003	4367	2841	0.65

Cont ..5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Simsim				Groundnut			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	4,869	1,709	569.05	0.33	13,950	4,444	1,937	0.4
Songea Rural	3,990	1,954	732.13	0.37	7,167	2,198	1,383	0.6
Mbinga	6,815	2,755	988.56	0.36	5,369	1,219	1,298	1.1
Songea Urban	89	20	13.29	0.65	476	108	61	0.6
Namtumbo	9,878	5,280	2,348.61	0.44	7,867	3,263	2,884	0.9
Total	25,642	11,718	4,651.65	0.40	34,829	11,232	7,561	0.7

Cont ..5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Soya Beans				Castor Fung			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	0	.	.	.	0	.	.	.
Songea Rural	5,619	2,305	1,419	0.62	81	33	.00	.
Mbinga	3,098	1,609	1,213	0.75	0	.	.	.
Songea Urban	89	33	31	0.93	0	.	.	.
Namtumbo	4,458	2,398	1,648	0.69	0	.	.	.
Total	13,264	6,345	4,311	0.68	81	33	0	-

Cont ..5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Bitter Aubergine				Onion			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	465	28	106	4	698	75.38	211	3
Songea Rural	1,326	74	547	7	0	.	.	.
Mbinga	408	23	133	6	204	20.64	65	3
Songea Urban	78	8	20	3	0	.	.	.
Namtumbo	0	.	.	.	129	3.65	10	3
Total	288	21	73	3	0	.	.	.

Cont.. 5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Ginger				Cabbage			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	0	.	.	.	395	21	158	7
Songea Rural	0	.	.	.	896	49	205	4
Mbinga	0	.	.	.	1,033	122	341	3
Songea Urban	0	.	.	.	89	10	32	3
Namtumbo	0	.	.	.	524	102	168	2
Total	0	.	.	.	2,937	305	904	3

Cont.. 5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Tomatoes				Spinach			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	1,316	180	2,155	12	395	14	111	8
Songea Rural	1,629	218	1,937	9	1,710	185	831	5
Mbinga	3,098	535	7,624	14	3,717	451	341	1
Songea Urban	684	121	914	8	624	47	104	2
Namtumbo	437	57	743	13	1,049	153	496	3
Total	7,163	1,111	13,372	12	7,496	849	1,884	2

Cont ..5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Carrot				Chillies			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	0	.	.	.	0	.	.	.
Songea Rural	0	.	.	.	163	20	1	0
Mbinga	207	84	10	0	0	.	.	.
Songea Urban	0	.	.	.	30	2	18	7
Namtumbo	0	.	.	.	175	159	411	3
Total	207	84	10	0	367	181	430	2

Cont.. 5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Amaranths				Pumpkins			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	526	30	267	9	0	.	.	.
Songea Rural	326	18	44	2	163	7	24	3
Mbinga	413	63	826	13	0	.	.	.
Songea Urban	149	14	10	1	119	14	43	3
Namtumbo	874	91	265	3	87	18	9	0
Total	2,288	217	1,412	7	369	39	76	2

Cont ..5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Egg Plant				Egg Plant			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	0	.	.	.	0	.	.	.
Songea Rural	0	.	.	.	0	.	.	.
Mbinga	0	.	.	.	0	.	.	.
Songea Urban	30	1	24	25	30	1	24	25
Namtumbo	0	.	.	.	0	.	.	.
Total	30	1	24	25	30	1	24	25

Cont.. 5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Water Mellon				Cotton			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	0	.	.	.	0	.	.	.
Songea Rural	147	15	133	9	81	16	10	1
Mbinga	0	.	.	.	0	.	.	.
Songea Urban	0	.	.	.	0	.	.	.
Namtumbo	0	.	.	.	0	.	.	.
Total	0	.	.	.	81	16	10	1

Cont.. 5.6: Number of Agricultural Households, Area Planted (ha) and Quantity Harvested (tonnes) during Short and Long Rainy SEASON Agricultural Year 2007/08

District	Tobacco			
	No of Hholds	Actual Planted Area (ha)	Quantity Harvested (tons)	Yield (tons/ha)
Tunduru	263	133	41	0
Songea Rural	407	264	271	1
Mbinga	207	84	107	1
Songea Urban	59	30	15	0
Namtumbo	4,895	3,672	3,758	1
Total	5,832	4,183	4,192	1

CROP STORAGE

5.7: Number of households Storing Crops by Season and District

District	SHORT RAINY SEASON					LONG RAINY SEASON					SHORT & LONG SEASON				
	Number of households storing crops	%	Number of households not storing crops	%	Total	Number of households storing crops	%	Number of households not storing crops	%	Total	Number of households storing crops	%	Number of households not storing crops	%	Total
Tunduru	263	100	0	0	263	52,114	99	658	1	52,772	52,378	99	658	1	53,036
Songea Rural	81	100	0	0	81	32,738	100	81	0	32,820	32,820	100	81	0	32,901
Mbinga	0	0	0	0	0	73,104	96	2,685	4	75,789	73,104	96	2,685	4	75,789
Songea Urban	0	0	0	0	0	7,463	100	30	0	7,493	7,463	100	30	0	7,493
Namtumbo	0	0	87	100	87	32,257	99	437	1	32,694	32,257	98	524	2	32,781
Total	345	80	87	20	432	197,677	98	3,891	2	201,568	198,021	98	3,978	2	202,000

5.8: Number of Households by Methods of Storage and District

Method of Storage	Tunduru	Songea Rural	Mbinga	Songea Urban	Namtumbo	Total
In locally made traditional structure	59,484	34,041	103,668	3,479	45,369	246,041
In Improved locally made structure	4,474	896	3,304	803	962	10,439
In modern store	263	652	-	59	87	1,062
In Sacks/open drum	68,960	46,664	212,292	11,477	28,935	368,327
In airtight drum	263	489	-	59	350	1,161
Unprotected pile	395	2,117	4,130	327	-	6,969
Other	132	4,398	7,434	89	262	12,315

MARKETING

5.9: Number of Crop Growing households reporting Selling agricultural produce during 2007/08 by District and Season

SHORT RAINY SEASON					
District	Number of households that sold	%	Number of households that did not sold	%	Total number of households
Tunduru	263	100	0	0	263
Songea Rural	81	100	0	0	81
Mbinga	0	0	0	0	0
Songea Urban	0	0	0	0	0
Namtumbo	0	0	87	100	87
Total	345	80	87	20	432

5.10: Number of Crop Growing households reporting Selling agricultural produce during 2007/08 by District and Season

LONG RAINY SEASON					
District	Number of households that sold	%	Number of households that did not sold	%	Total number of households
Tunduru	46,719	89	6,054	11	52,772
Songea Rural	29,807	91	3,013	9	32,820
Mbinga	55,758	74	20,031	26	75,789
Songea Urban	5,649	75	1,843	25	7,493
Namtumbo	30,858	94	1,836	6	32,694
Total	168,790	84	32,778	16	201,568

5.11 : Number of Households Reporting Marketing Problems for agricultural products by Crop, SHORT RAINY SEASON - RUVUMA REGION

Crop	Open Market Price too low	No Transport	Transport Cost too high	No buyer	Crop Market too Far	Farmer Association problems	Cooperative problems	Trade Union Problems	Goernment Rugulatory Problems	Lack of Market Information	No problem	Other	Not Applicable
Maize	213	0	0	0	0	0	0	0	0	0	0	0	219
Paddy	213	0	0	0	0	0	0	0	0	0	132	0	0
Sorghum	0	0	0	0	0	0	0	0	0	0	0	0	132
Bulrush Millet	0	0	0	0	0	0	0	0	0	0	0	0	0
Finger Millet	0	0	0	0	0	0	0	0	0	0	0	0	81
Wheat	0	0	0	0	0	0	0	0	0	0	0	0	0
CEREALS	426	0	0	0	0	0	0	0	0	0	132	0	432
Cassava	0	0	0	0	0	0	0	0	0	0	0	0	0
Sweet Potato	81	0	0	0	0	0	0	0	0	0	0	0	0
Irish potatoes	0	0	0	0	0	0	0	0	0	0	0	0	0
Yams	0	0	0	0	0	0	0	0	0	0	0	0	0
Coco Yam	0	0	0	0	0	0	0	0	0	0	0	0	0
ROOTS & TUBERS	81	0	0	0	0	0	0	0	0	0	0	0	0
Mung Bean	0	0	0	0	0	0	0	0	0	0	0	0	0
Beans	0	0	0	0	0	0	0	0	0	0	0	0	0
Cowpeas	0	0	0	0	0	0	0	0	0	0	0	0	0
Green gram	0	0	0	0	0	0	0	0	0	0	0	0	0
Bambaranuts	0	0	0	0	0	0	0	0	0	0	0	0	0
Field Peas	0	0	0	0	0	0	0	0	0	0	0	0	0
PULSES	0	0	0	0	0	0	0	0	0	0	0	0	0
Sunflower	0	0	0	0	0	0	0	0	0	0	0	0	0
Simsim	0	0	0	0	0	0	0	0	0	0	0	0	0
Groundnut	0	0	0	0	0	0	0	0	0	0	0	0	0
Soya Beans	0	0	0	0	0	0	0	0	0	0	0	0	87
Castor Fung	0	0	0	0	0	0	0	0	0	0	0	0	0
OIL SEEDS & OIL NUTS	0	0	0	0	0	0	0	0	0	0	0	0	87

cont. 5.11: Number of Households Reporting Marketing Problems for agricultural products by Crop, SHORT RAINY SEASON - RUVUMA REGION

Crop	Open Market Price too low	No Transport	Transport Cost too high	No buyer	Crop Market too Far	Farmer Association problems	Cooperative problems	Trade Union Problems	Goernment Rugulatory Problems	Lack of Market Information	No problem	Other	Not Applicable
Okra	0	0	0	0	0	0	0	0	0	0	0	0	0
Radish	0	0	0	0	0	0	0	0	0	0	0	0	0
Bitteer Aubergine	0	0	0	0	0	0	0	0	0	0	0	0	0
Onion	0	0	0	0	0	0	0	0	0	0	0	0	0
Ginger	0	0	0	0	0	0	0	0	0	0	0	0	0
Cabbage	0	0	0	0	0	0	0	0	0	0	0	0	0
Tomatoes	0	0	0	0	0	0	0	0	0	0	0	0	0
Spinach	0	0	0	0	0	0	0	0	0	0	0	0	0
Carrot	0	0	0	0	0	0	0	0	0	0	0	0	0
Chillies	0	0	0	0	0	0	0	0	0	0	0	0	0
Amaranths	0	0	0	0	0	0	0	0	0	0	0	0	0
Pumpkins	0	0	0	0	0	0	0	0	0	0	0	0	0
Egg Plant	0	0	0	0	0	0	0	0	0	0	0	0	0
FRUITS & VEGETABLES	0	0	0	0	0	0	0	0	0	0	0	0	0
Cotton	0	0	0	0	0	0	0	0	0	0	0	0	0
Tobacco	0	0	0	0	0	0	0	0	0	0	0	0	0
CASH CROPS	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	508	0	0	0	0	0	0	0	0	0	132	0	519

5.12: Number of Households Reporting Marketing Problems for agricultural products by Crop, LONG RAINY SEASON - RUVUMA REGION

Crop	Open Market Price too low	No Transport	Transport Cost too high	No buyer	Crop Market too Far	Farmer Association problems	Cooperative problems	Trade Union Problems	Goernment Rugulatory Problems	Lack of Market Information	No problem	Other	Not Applicable
Maize	84,154	1,257	4,973	907	2,555	0	3,848	332	694	1,425	14,199	132	75,267
Paddy	46,819	639	3,025	30	1,098	0	5,659	570	132	1,025	8,744	81	15,078
Sorghum	1,974	132	0	0	0	0	790	0	0	0	263	0	4,829
Bulrush Millet	87	0	0	0	0	0	0	0	0	0	0	0	0
Finger Millet	10,575	163	1,283	0	689	0	395	87	81	425	3,404	0	4,122
Wheat	4,831	207	207	0	0	0	0	0	0	0	413	0	1,888
CEREALS	148,441	2,397	9,488	937	4,342	0	10,691	989	907	2,876	27,024	213	101,185
Cassava	375	0	0	0	81	0	0	81	0	0	169	0	213
Sweet Potato	6,870	0	773	111	1,586	0	132	0	0	338	1,012	0	7,675
Irish potatoes	494	0	0	0	0	0	0	0	0	0	0	0	420
Yams	263	0	0	0	0	0	0	0	0	0	0	0	0
Coco Yam	1,888	0	207	0	207	0	0	0	0	0	207	0	1,527
ROOTS & TUBERS	9,891	0	979	111	1,874	0	132	81	0	338	1,388	0	9,835
Mung Bean	467	0	87	0	0	0	0	0	0	0	0	0	0
Beans	36,431	576	2,808	0	3,608	117	81	81	250	344	12,415	0	26,481
Cowpeas	7,725	0	81	81	132	0	1,448	0	0	132	556	0	8,536
Green gram	263	0	0	0	0	0	0	0	0	0	132	0	395
Bambaranuts	3,882	0	30	175	132	0	526	0	0	87	712	0	5,522
Field Peas	695	30	0	0	0	0	0	0	0	0	141	0	318
PULSES	49,463	606	3,007	256	3,871	117	2,055	81	250	563	13,956	0	41,252
Sunflower	5,917	0	961	407	87	0	0	0	0	963	1,068	0	1,598
Simsim	14,572	132	1,520	0	1,840	0	395	0	0	350	5,215	0	1,619
Groundnut	18,279	219	475	0	729	0	1,529	132	163	300	2,972	0	10,030
Soya Beans	9,387	0	381	0	864	0	0	81	0	524	1,688	0	250
Castor Fung	0	0	0	0	0	0	0	0	0	0	0	0	81
OIL SEEDS & OIL NUTS	48,156	351	3,337	407	3,521	0	1,924	213	163	2,138	10,943	0	13,579

cont. 5.12: Number of Households Reporting Marketing Problems for agricultural products by Crop, LONG RAINY SEASON - RUVUMA REGION

Crop	Open Market Price too low	No Transport	Transport Cost too high	No buyer	Crop Market too Far	Farmer Association problems	Cooperative problems	Trade Union Problems	Goernment Rugulatory Problems	Lack of Market Information	No problem	Other	Not Applicable
Okra	171	0	30	0	30	0	0	0	0	0	0	0	175
Radish	30	0	0	0	0	0	132	0	0	0	0	0	0
Bitteer Aubergine	30	0	30	0	0	81	0	0	0	0	0	0	0
Onion	2,421	256	169	0	207	0	0	0	0	0	296	0	369
Ginger	175	0	0	0	0	0	0	0	0	0	0	0	0
Cabbage	1,585	0	0	0	0	0	0	0	0	0	1,220	0	132
Tomatoes	4,986	59	426	0	435	207	0	0	0	0	651	0	399
Spinach	4,923	87	361	0	0	0	0	0	0	0	1,380	0	743
Carrot	207	0	0	0	0	0	0	0	0	0	0	0	0
Chillies	169	30	87	0	0	0	0	0	0	0	0	0	81
Amaranths	1,304	0	0	30	87	0	0	0	0	0	330	0	537
Pumpkins	199	30	0	0	0	0	0	0	0	0	0	0	141
Egg Plant	30	0	0	0	0	0	0	0	0	0	0	0	0
FRUITS & VEGETABLES	16,229	463	1,103	30	759	288	132	0	0	0	3,877	0	2,577
Cotton	0	0	0	0	0	0	0	0	0	0	0	0	81
Tobacco	3,078	0	87	87	87	0	437	87	87	0	711	818	350
CASH CROPS	3,078	0	87	87	87	0	437	87	87	0	711	818	431
Total	275,258	3,816	18,002	1,829	14,455	405	15,371	1,452	1,407	5,915	57,899	1,031	168,859

INPUT USE

5.13: Number of Households and Planted Area by Organic Fertiliser Use and District - SHORT RAINY SEASON

District	Organic Fertilizer Use						% of Planted area using Organic Fertilizer
	Number of Households using Organic Fertilizer	Planted Area Applied with Organic Fertilizer	Number of Households NOT using Organic Fertilizer	Planted Area NOT Applied with Organic Fertilizer	Total Number of Households Planting in VULI	Total Planted Area in VULI	
Tunduru	0	0	263	293	263	293	0.0
Songea Rural	0	0	81	66	81	66	0.0
Mbinga	0	0	0	0	0	0	0.0
Songea Urban	0	0	0	0	0	0	0.0
Namtumbo	0	0	87	142	87	142	0.0
Total	0	0	432	501	432	501	0.0

5.14: Number of Households and Planted Area by Organic Fertiliser Use and District - LONG RAINY SEASON

District	Organic Fertilizer Use						% of Planted area using Organic Fertilizer
	Number of Households using Organic Fertilizer	Planted Area Applied with Organic Fertilizer	Number of Households NOT using Organic Fertilizer	Planted Area NOT Applied with Organic Fertilizer	Total Number of Households Planting in MASIKA	Total Planted Area in MASIKA	
Tunduru	1,053	1,033	51,720	73,922	52,772	74,955	1.4
Songea Rural	3,665	1,553	29,155	52,788	32,820	54,340	2.9
Mbinga	7,021	4,113	68,768	98,254	75,789	102,368	4.0
Songea Urban	1,041	429	6,452	7,142	7,493	7,571	5.7
Namtumbo	2,011	1,820	30,683	59,792	32,694	61,611	3.0
Total	14,790	8,948	186,778	291,897	201,568	300,845	3.0

5.15: Number of Households and Planted Area by Inorganic Fertiliser Use and District - SHORT RAINY SEASON

District	Inorganic Fertilizer Use						% of Planted area using Inorganic Fertilizer
	Number of Households using Inorganic Fertilizer	Planted Area Applied with Inorganic Fertilizer	Number of Households NOT using Inorganic Fertilizer	Planted Area NOT Applied with Inorganic Fertilizer	Total Number of Households Planting in VULI	Total Planted Area in VULI	
Tunduru	263	0	0	293	263	293	0.0
Songea Rural	81	25	0	41	81	66	37.5
Mbinga	0	.	0	.	0	.	0.0
Songea Urban	0	.	0	.	0	.	0.0
Namtumbo	87	0	0	142	87	142	0.0
Total	432	25	0	476	432	501	4.9

5.16: Number of Households and Planted Area by Inorganic Fertiliser Use and District - LONG RAINY SEASON

District	Inorganic Fertilizer Fertilizer Use						% of Planted area using Inorganic Fertilizer
	Number of Households using Inorganic Fertilizer	Planted Area Applied with Inorganic Fertilizer	Number of Households NOT using Inorganic Fertilizer	Planted Area NOT Applied with Inorganic Fertilizer	Total Number of Households Planting in MASIKA	Total Planted Area in MASIKA	
Tunduru	52,772	13,218	0	61,737	52,772	74,955	17.6
Songea Rural	32,820	23,727	0	30,613	32,820	54,340	43.7
Mbinga	75,789	15,339	0	87,028	75,789	102,368	15.0
Songea Urban	7,493	5,315	0	2,256	7,493	7,571	70.2
Namtumbo	32,694	25,558	0	36,053	32,694	61,611	41.5
Total	201,568	83,157	0	217,688	201,568	300,845	27.6

5.17: Number of Households and Planted Area by Fungicide Use and District - SHORT RAINY SEASON

District	Fungicide Use						% of Planted area using Fungicide
	Number of Households using Fungicide	Planted Area Applied with Fungicide	Number of Households NOT using Fungicide	Planted Area NOT Applied with Fungicide	Total Number of Households Planting in VULI	Total Planted Area in VULI	
Tunduru	0	0	263	293	263	293	0.0
Songea Rural	0	0	81	66	81	66	0.0
Mbinga	0	0	0	0	0	0	0.0
Songea Urban	0	0	0	0	0	0	0.0
Namtumbo	0	0	87	142	87	142	0.0
Total	0	0	432	501	432	501	0.0

5.18: Number of Households and Planted Area by Fungicide Use and District - LONG RAINY SEASON

District	Fungicide Use						% of Planted area using Fungicide
	Number of Households using Fungicide	Planted Area Applied with Fungicide	Number of Households NOT using Fungicide	Planted Area NOT Applied with Fungicide	Total Number of Households Planting in MASIKA	Total Planted Area in MASIKA	
Tunduru	790	852	51,983	74,102	52,772	74,955	1.1
Songea Rural	977	610	31,843	53,730	32,820	54,340	1.1
Mbinga	2,478	1,282	73,311	101,086	75,789	102,368	1.3
Songea Urban	357	80	7,136	7,490	7,493	7,571	1.1
Namtumbo	87	18	32,606	61,594	32,694	61,611	0.0
Total	4,689	2,842	196,878	298,003	201,568	300,845	0.9

5.19: Number of Households and Planted Area by Herbicide Use and District - SHORT RAINY SEASON

District	Herbicide Use						% of Planted area using Herbicide
	Number of Households using Herbicide	Planted Area Applied with Herbicide	Number of Households NOT using Herbicides	Planted Area NOT Applied with Herbicide	Total Number of Households Planting in VULI	Total Planted Area in VULI	
Tunduru	0	0	263	293	263	293	.
Songea Rural	0	0	81	66	81	66	0.0
Mbinga	0	0	0	0	0	0	0.0
Songea Urban	0	0	0	0	0	.	0.0
Namtumbo	0	0	87	142	87	142	0.0
Total	0	0	432	501	432	501	0.0

5.20: Number of Households and Planted Area by Herbicide Use and District - LONG RAINY SEASON

District	Herbicide Use						% of Planted area using Herbicide
	Number of Households using Herbicide	Planted Area Applied with Herbicide	Number of Households NOT using Herbicides	Planted Area NOT Applied with Herbicide	Total Number of Households Planting in MASIKA	Total Planted Area in MASIKA	
Tunduru	526	645	52,246	74,310	52,772	74,955	0.9
Songea Rural	407	134	32,413	54,206	32,820	54,340	0.2
Mbinga	826	685	74,963	101,683	75,789	102,368	0.7
Songea Urban	0	0	7,493	7,571	7,493	7,571	0.0
Namtumbo	524	347	32,169	61,265	32,694	61,611	0.6
Total	2,284	1,810	199,283	299,035	201,568	300,845	0.6

5.21: Number of Households and Planted Area by Improved Seed Use and District - SHORT RAINY SEASON

District	Improved Seed						% of area planted using improved seed
	Number of Households using Improved Seed	Planted Area Improved Seed Used	Number of Households NOT using Improved Seeds	Planted Area Improved Seed not Used	Total Number of Households Planting in VULI	Total Planted Area in VULI	
Tunduru	263	253	0	40	263	293	86.4
Songea Rural	81	41	0	25	81	66	62.5
Mbinga	0	.	0	.	0	.	0.0
Songea Urban	0	.	0	.	0	.	0.0
Namtumbo	87	71	0	71	87	142	50.0
Total	432	365	0	135	432	501	72.9

5.22: Number of Households and Planted Area by Improved Seed Use and District - LONG RAINY SEASON

District	Improved Seed						% of area planted using improved seed
	Number of Households using Improved Seed	Planted Area Improved Seed Used	Number of Households NOT using Improved Seeds	Planted Area Improved Seed not Used	Total Number of Households Planting in MASIKA	Total Planted Area in MASIKA	
Tunduru	3,027	629	49,746	74,325	52,772	74,955	0.8
Songea Rural	7,737	7,941	25,083	46,399	32,820	54,340	14.6
Mbinga	7,228	4,475	68,561	97,893	75,789	102,368	4.4
Songea Urban	1,635	1,195	5,857	6,376	7,493	7,571	15.8
Namtumbo	6,381	5,162	26,312	56,450	32,694	61,611	8.4
Total	26,008	19,402	175,560	281,443	201,568	300,845	6.4

5.23: Number of crop Growing Households and Planted Area (hectare) by Local Seed Use and District; 2007/08 Agriculture Year - SHORT Rainy Season

District	Using Local seed		Not using Local seed		TOTAL		% of Planted Area Using Local seeds
	Number of Households	Planted Area (ha)	Number of Households	Planted Area (ha)	Number of Households	Planted Area (ha)	
Tunduru	263	253	0	40	263	293	86.4
Songea Rural	81	41	0	25	81	66	62.5
Mbinga	0	0	0	0	0	0	0.0
Songea Urban	0	0	0	0	0	0	0.0
Namtumbo	87	71	0	71	87	142	50.0
Total	432	365	0	135	432	501	72.9

5.24: Number of crop Growing Households and Planted Area (hectare) by Local Seed Use and District; 2007/08 Agriculture Year - LONG Rainy Season

District	Using Local seed		Not using Local seed		TOTAL		% of Planted Area Using Local seeds
	Number of Households	Planted Area (ha)	Number of Households	Planted Area (ha)	Number of Households	Planted Area (ha)	
Tunduru	52,509	68,899	263	6,056	52,772	74,955	91.9
Songea Rural	32,087	46,140	733	8,200	32,820	54,340	84.9
Mbinga	75,376	97,051	413	5,316	75,789	102,368	94.8
Songea Urban	7,076	6,262	416	1,309	7,493	7,571	82.7
Namtumbo	32,431	54,459	262	7,153	32,694	61,611	88.4
Total	199,480	272,811	2,088	28,034	201,568	300,845	90.7

5.25: Number of Households and Planted Area by Insecticides Use by District - SHORT RAINY SEASON

District	Insecticide Use						% of Planted area using Insecticides
	Number of Households using Insecticides	Planted Area Applied with Insecticides	Number of Households NOT using Insecticides	Planted Area Without Insecticides	Total Number of Households Planting in VULI	Total Planted Area in VULI	
Tunduru	0	0	263	293	263	293	0.0
Songea Rural	0	0	81	66	81	66	0.0
Mbinga	0	0	0	0	0	0	0.0
Songea Urban	0	0	0	0	0	0	0.0
Namtumbo	0	0	87	142	87	142	0.0
Total	0	0	432	501	432	501	0.0

5.26: Number of Households and Planted Area by Insecticide Use and District - LONG RAINY SEASON

District	Insecticide Use						% of Planted area using Insecticides
	Number of Households using Insecticides	Planted Area Applied with Insecticides	Number of Households NOT using Insecticides	Planted Area Without Insecticides	Total Number of Households Planting in MASIKA	Total Planted Area in MASIKA	
Tunduru	1,053	494	51,720	74,460	52,772	74,955	0.7
Songea Rural	2,932	2,898	29,888	51,442	32,820	54,340	5.3
Mbinga	16,314	10,616	59,475	91,752	75,789	102,368	10.4
Songea Urban	1,754	993	5,738	6,577	7,493	7,571	13.1
Namtumbo	1,311	992	31,382	60,620	32,694	61,611	1.6
Total	23,364	15,994	178,203	284,851	201,568	300,845	5.3

5.27: Number of Households and Planted Area by Irrigation Use and District - SHORT RAINY SEASON

District	Irrigation use						% of area planted under irrigation in Short rainy season
	Number of Households using Irrigation	Planted Area with Irrigation	Number of Households NOT using Irrigation	Planted Area with no Irrigation	Total Number of Households Planting in VULI	Total Planted Area in VULI	
Tunduru	0	0	263	293	263	293	0.0
Songea Rural	0	0	81	66	81	66	0.0
Mbinga	0	0	0	.	0	.	0.0
Songea Urban	0	0	0	.	0	.	0.0
Namtumbo	0	0	87	142	87	142	0.0
Total	0	0	432	501	432	501	0.0

5.28: Number of Households and Planted Area by Irrigation Use and District - LONG RAINY SEASON

District	Irrigation use						% of area planted under irrigation in long rainy season
	Number of Households using Irrigation	Planted Area with Irrigation	Number of Households NOT using Irrigation	Planted Area with no Irrigation	Total Number of Households Planting in MASIKA	Total Planted Area in MASIKA	
Tunduru	2,106	1,410	50,667	73,545	52,772	74,955	1.9
Songea Rural	5,049	1,410	27,771	52,931	32,820	54,340	2.6
Mbinga	7,021	2,834	68,768	99,533	75,789	102,368	2.8
Songea Urban	1,457	495	6,036	7,076	7,493	7,571	6.5
Namtumbo	4,720	3,392	27,973	58,220	32,694	61,611	5.5
Total	20,354	9,541	181,214	291,304	201,568	300,845	3.2

PERMANENT CROPS

5.29: Number of Households Planting Permanent Crops by District , 2007/08 Agriculture Year

District	Have Crops/Fruit Trees		Does Not Have Crops/Fruit Trees		Total	
	Number of HH	%	Number of HH	%	Number of HH	%
Tunduru	45,008	84	8,291	16	53,299	100
Songea Rural	22,233	67	10,750	33	32,983	100
Mbinga	65,877	79	17,760	21	83,636	100
Songea Urban	4,549	60	3,033	40	7,582	100
Namtumbo	19,494	59	13,287	41	32,781	100
Total	157,160	75	53,121	25	210,281	100

5.30: Planted Area and Area Harvested by Type of Planting and District

District	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)
	Number of household	Area	Number of household	Area	Number of household	Area	
Tunduru	27,242	48,542	28,821	57,327	45,008	105,869	71,288
Songea Rural	12,949	5,441	12,216	3,462	22,233	8,903	6,465
Mbinga	52,866	39,151	23,336	34,100	65,670	73,250	45,941
Songea Urban	2,141	993	2,706	1,093	4,549	2,086	1,580
Namtumbo	12,850	7,393	8,567	4,457	19,406	11,850	8,101
Total	108,048	101,519	75,645	100,439	156,866	201,958	133,376

5.31: Area Planted, Area harvested, Quantity Harvested and Yield by Type of Permanent Crop-TUNDURU

Crop	Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)	Quantity Harvested (kgs)	Yield (tons/Ha)	Yield (Kg/Ha)
	Number of households	Area					
Cashewnut	34,611	71,594	52,651	7,516	7,516,198	0	143
Banana	1,842	416	342	544	543,517	2	1,591
Mango	1,448	297	86	615	614,977	7	7,115
Pigeon pea	10,002	16,110	3,392	868	868,180	0	256
Coconut	3,158	607	526	440	440,209	1	838
Orange	2,237	154	120	915	915,030	8	7,638
Sugar Cane	526	372	294	34	34,217	0	116
Other	28,689	16,319	13,878	14,900	14,900,268	1	1074
Total	82,646	105,896	71,288	25,833	25,832,597	0	362

5.32: Area Planted, Area harvested, Quantity Harvested and Yield by Type of Permanent Crop-SONGEA RURAL

Crop	Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)	Quantity Harvested (kgs)	Yield (tons/Ha)	Yield (Kg/Ha)
	Number of households	Area					
Cashewnut	814	207	72	16	16,206	0.2	226
Banana	7,981	1,289	728	8,986	8,986,426	12.3	12,338
Coffee	570	246	80	159	158,642	2.0	1,979
Mango	5,701	730	125	13,267	13,266,840	106.1	106,077
Pigeon pea	570	146	72	54	53,831	0.7	746
Coconut	407	15	9	57	56,681	6.3	6,314
Orange	2,117	177	70	2,775	2,774,858	39.6	39,578
Sugar Cane	1,303	234	201	5,397	5,396,775	26.9	26,857
Other	20,115	5,857	5,108	10,721	10,721,313	2.1	2,099
Total		9,051	6,762	41,434	41,433,572		

5.33: Area Planted, Area harvested, Quantity Harvested and Yield by Type of Permanent Crop-MBINGA

Crop	Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)	Quantity Harvested (kgs)	Yield (tons/Ha)	Yield (Kg/Ha)
	Number of households	Area					
Cashewnut	1,239	752	683	66	66,496	0	97
Banana	21,684	4,461	1,692	20,643	20,642,711	12	12,203
Coffee	36,346	30,433	18,218	22,465	22,465,160	1	1,233
Mango	3,098	504	309	654	653,603	2	2,117
Pigeon pea	-	.	.	0	0	0	0
Coconut					0	0	0
Orange	826	142	49	25	24,781	1	507
Sugar Cane	2,891	703	588	4,442	4,442,024	8	7,552
Other	47,291	36,256	24,402	65,347	65,347,315	3	2,678
Total		73,292	45,994	113,642	113,642,090		

5.34: Area Planted, Area harvested, Quantity Harvested and Yield by Type of Permanent Crop-SONGEA URBAN

Crop	Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)	Quantity Harvested (kgs)	Yield (tons/Ha)	Yield (Kg/Ha)
	Number of households	Area					
Cashewnut					0	.00	.00
Banana	2,289	422	324	1,454	1,453,567	4	4,481.63
Coffee	89	56	56	17	16,650	0	299.45
Mango	1,160	354	38	2,871	2,870,979	75	75,268.24
Pigeon pea	327	47	38	25	25,332	1	665.87
Coconut					0	0	.00
Orange	416	38	31	54	54,262	2	1,745.16
Sisal					0	0	.00
Sugar Cane	268	27	18	186	186,334	11	10,612.12
Other	4,281	1,143	1,076	1,973	1,972,846	2	1,834.35
Total		2,086	1,580	6,580	6,579,970		

5.35: Area Planted, Area harvested, Quantity Harvested and Yield by Type of Permanent Crop-NAMTUMBO

Crop	Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)	Quantity Harvested (kgs)	Yield (tons/Ha)	Yield (Kg/Ha)
	Number of households	Area					
Cashewnut	962	1,815	206	150	150,269	1	727.71
Banana	4,895	1,531	1,130	5,897	5,897,102	5	5,218.45
Mango	3,147	1,024	600	1,810	1,810,304	3	3,019.35
Pigeon pea	1,486	382	356	229	229,031	1	643.60
Coconut	437	78	43	15	14,861	0	348.23
Orange	1,836	210	82	1,440	1,440,271	18	17,504.20
Sugar Cane	1,224	336	325	5,700	5,700,066	18	17,526.27
Other	29,372	11,850	8,101	27,631	27,631,151	3	3,410.81
Total		17,253	10,861	42,873	42,873,054		

5.36: Mono and Mixed Crops by Area Planted, Area Harvested and Quantity Harvested, Type of Planting Crops and District

District	Cashewnut							
	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)
	Number of households	Area	Number of households	Area	Number of households	Area	Area	tons
Tunduru	22,504	42,918	14,081	28,675	34,611	71,594	52,651	7,516
Songea Rural	489	99	326	108	814	207	72	16
Mbinga	826	671	413	81	1,239	752	683	66
Songea Urban	0	0	0	0	0	0	0	0
Namtumbo	874	903	262	912	962	1,815	206	150
Total	24,693	44,592	15,082	29,776	37,626	74,368	53,612	7,749

Cont. 5.36: Mono and Mixed Crops by Area Planted, Area Harvested and Quantity Harvested, Type of Planting Crops and District

District	Banana							
	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)
	Number of households	Area	Number of households	Area	Number of households	Area	Area	tons
Tunduru	526	265	1,448	151	1,842	416	342	544
Songea Rural	3,339	681	5,049	608	7,981	1,289	728	8,986
Mbinga	4,337	1,254	17,553	3,208	21,684	4,461	1,692	20,643
Songea Urban	1,041	276	1,368	146	2,289	422	324	1,454
Namtumbo	2,535	907	2,448	624	4,895	1,531	1,130	5,897
Total	11,778	3,383	27,865	4,737	38,692	8,119	4,216	37,523

Cont. 5.36: Mono and Mixed Crops by Area Planted, Area Harvested and Quantity Harvested, Type of Planting Crops and District

District	Coffee							
	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)
	Number of households	Area	Number of households	Area	Number of households	Area	Area	tons
Tunduru								
Songea Rural	244	138	326	108	570	246	80	159
Mbinga	21,271	12,903	15,695	17,530	36,346	30,433	18,218	22,465
Songea Urban	89	56	0	.	89	56	56	17
Namtumbo								
Total	21,604	13,096	16,020	17637.844	37,005	30734.107	18354	22640

Cont. 5.36: Mono and Mixed Crops by Area Planted, Area Harvested and Quantity Harvested, Type of Planting Crops and District

District	Mango							
	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)
	Number of households	Area	Number of households	Area	Number of households	Area	Area	tons
Tunduru	132	52	1,448	245	1,448	297	86	615
Songea Rural	1,303	172	4,723	558	5,701	730	125	13,267
Mbinga	1,033	212	2,272	291	3,098	504	309	654
Songea Urban	0	.	1,160	354	1,160	354	38	2,871
Namtumbo	1,224	751	2,098	272	3,147	1,024	600	1,810
Total	3,691	1,187	11,700	1,722	14,553	2,909	1,158	19,217

Cont. 5.36: Mono and Mixed Crops by Area Planted, Area Harvested and Quantity Harvested, Type of Planting Crops and District

District	Pigeon pea							
	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)
	Number of households	Area	Number of households	Area	Number of households	Area	Area	tons
Tunduru	1,448	311	9,081	15,799	10,002	16,110	3,392	868
Songea Rural	244	40	326	106	570	146	72	54
Mbinga								
Songea Urban	59	18	268	29	327	47	38	25
Namtumbo	962	246	524	136	1,486	382	356	229
Total	2,713	615	10,198	16,070	12,385	16,685	3,858	1,176

Cont. 5.36: Mono and Mixed Crops by Area Planted, Area Harvested and Quantity Harvested, Type of Planting Crops and District

District	Coconut							
	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)
	Number of households	Area	Number of households	Area	Number of households	Area	Area	tons
Tunduru	921	396	2,369	211	3,158	607	526	440
Songea Rural	407	15	0	.	407	15	9	57
Mbinga								
Songea Urban								
Namtumbo	87	26	350	52	437	78	43	15
Total	1,416	437	2,719	263	4,003	700	577	512

Cont. 5.36: Mono and Mixed Crops by Area Planted, Area Harvested and Quantity Harvested, Type of Planting Crops and District

District	Orange							
	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)
	Number of households	Area	Number of households	Area	Number of households	Area	Area	tons
Tunduru	526	22	1,842	133	2,237	154	120	915
Songea Rural	489	42	1,710	135	2,117	177	70	2,775
Mbinga	207	41	620	102	826	142	49	25
Songea Urban	119	30	327	8	416	38	31	54
Namtumbo	437	120	1,486	89	1,836	210	82	1,440
Total	1,778	255	5,985	467	7,433	722	352	5,209

Cont. 5.36: Mono and Mixed Crops by Area Planted, Area Harvested and Quantity Harvested, Type of Planting Crops and District

District	Sugar Cane							
	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)
	Number of households	Area	Number of households	Area	Number of households	Area	Area	tons
Tunduru	263	363	263	9	526	372	294	34
Songea Rural	896	176	407	58	1,303	234	201	5,397
Mbinga	2,891	561	207	142	2,891	703	588	4,442
Songea Urban	119	18	178	9	268	27	18	186
Namtumbo	787	189	524	146	1,224	336	325	5,700
Total	4,956	1,307	1,580	364	6,212	1,671	1,426	15,759

Cont. 5.36: Mono and Mixed Crops by Area Planted, Area Harvested and Quantity Harvested, Type of Planting Crops and District

District	Other							
	Area of Plants/Trees/Bushes in Mono Crop (ha)		Area Covered by Permanent Crop in Mixed Crop (ha)		Total Area Planted (ha) Mono+Mixed Area		Area harvested (ha)	Quantity harvested (tons)
	Number of households	Area	Number of households	Area	Number of households	Area	Area	tons
Tunduru	7,238	4,215	21,978	12,103	28,689	16,319	13,878	14,900
Songea Rural	10,750	4,076	9,773	1,781	20,115	5,857	5,108	10,721
Mbinga	37,378	23,510	11,978	12,746	47,291	36,256	24,402	65,347
Songea Urban	1,487	596	2,825	547	4,281	1,143	1,076	1,973
Namtumbo	9,441	4,249	6,469	2,225	15,385	6,475	5,359	12,389
Total	66,294	36,647	53,021	29,403	115,762	66,049	49,822	105,331

ACCESS TO EQUIPMENTS

6.1: Number of Agriculture Households that used Agricultural Equipment/Asset by type and District for 2007/08 agriculture year

District	Equipment/Asset Name												Total number of Agricultural Households
	Panga/Mundu/Hengo/Nyengo		Hand Hoe		Hand Sprayer		Grater, Chipper, Oil Press na Oil Mill		Ox Plough		Ox Seed Planter		
	Number of Household	%	Number of Household	%	Number of Household	%	Number of Household	%	Number of Household	%	Number of Household	%	
Tunduru	49,614	47	52,772	50	2,764	2.6	263	0.2	132	0.1	132	0.1	53,299
Songea Rural	31,761	45	32,413	46	3,502	5.0	163	0.2	244	0.3	163	0.2	32,983
Mbinga	81,984	42	83,223	43	20,031	10.3	5,782	3.0	207	0.1	0	0.0	83,636
Songea Urban	6,660	40	7,433	44	1,873	11.1	0	0.0	59	0.4	0	0.0	7,582
Namtumbo	30,858	46	31,732	47	3,409	5.1	262	0.4	87	0.1	0	0.0	32,781
Total	200,878	44.0	207,574	45.5	31,579	6.9	6,471	1.4	729	0.2	294	0.1	210,281

Cont. 6.1: Number of Agriculture Households that used Agricultural Equipment/Asset by type and District for 2007/08 agriculture year

District	Equipment/Asset Name												Total number of Agricultural Households
	Ox Cart		Tractor		Tractor Plough		Tractor Harrow		Castrated bulls		Uncastrated bulls		
	Number of Household	%	Number of Household	%	Number of Household	%	Number of Household	%	Number of Household	%	Number of Household	%	
Tunduru	132	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	53,299
Songea Rural	163	0.2	0	0.0	81	0.1	244	0.3	163	0.2	407	0.6	32,983
Mbinga	0	0.0	413	0.2	0	0.0	0	0.0	620	0.3	620	0.3	83,636
Songea Urban	0	0.0	0	0.0	0	0.0	0	0.0	149	0.9	89	0.5	7,582
Namtumbo	0	0.0	0	0.0	87	0.1	0	0.0	87	0.1	175	0.3	32,781
Total	294	0.1	413	0.1	169	0.0	244	0.1	1018	0.2	1291	0.3	210,281

Cont. 6.1: Number of Agriculture Households that used Agricultural Equipment/Asset by type and District for 2007/08 agriculture year

District	Equipment/Asset Name										Total number of Agricultural Households
	Cow		Donkey		Shellers/Threshers		Power tiller		Ox Ridger		
	Number of Household	%	Number of Household	%	Number of Household	%	Number of Household	%	Number of Household	%	
Tunduru	0	0.0	132	0.1	0	0.0	395	0.4	132	0.1	53,299
Songea Rural	814	1.2	244	0.3	163	0.2	81	0.1	81	0.1	32,983
Mbinga	826	0.4	0	0.0	1,239	0.6	207	0.1	207	0.1	83636
Songea Urban	446	2.7	0	0.0	0	0.0	30	0.2	0	0.0	7582
Namtumbo	87	0.1	87	0.1	0	0.0	0	0.0	0	0.0	32781
Total	2,174	0.5	463	0.1	1,402	0.3	712	0.2	420	0.1	210,281

6.2: Number of Agricultural Equipment/Asset owned by type and District for 2007/08 agriculture year

District	Equipment/Asset Name											
	Panga/Mundu/Hengo/Nyengo		Hand Hoe		Hand Sprayer		Grater, Chipper, Oil Press and Oil Mill		Ox Plough		Ox Seed Planter	
	Number Owned	%	Number Owned	%	Number Owned	%	Number Owned	%	Number Owned	%	Number Owned	%
Tunduru	102,781	35.8	161,608	56.3	3,027	1.1	3,290	1.1	263	0.1	2,895	1.0
Songea Rural	91,618	36.7	127,533	51.1	4,805	1.9	1,873	0.8	2,850	1.1	1,955	0.8
Mbinga	206,923	38.2	251,116	46.4	23,129	4.3	5,782	1.1	2,065	0.4	0	0.0
Songea Urban	16,650	34.4	25,689	53.1	2,825	5.8	0	0.0	714	1.5	0	0.0
Namtumbo	93,885	40.6	129,464	56.0	3,846	1.7	350	0.2	175	0.1	0	0.0
Total	511,858	37.7	695,409	51.2	37,632	2.8	11,295	0.8	6,067	0.4	4,850	0.4

Cont. 6.2: Number of Agricultural Equipment/Asset owned by type and District for 2007/08 agriculture year

District	Equipment/Asset Name											
	Ox Cart		Tractor		Tractor Plough		Tractor Harrow		Castrated bulls		Uncastrated bulls	
	Number Owned	%	Number Owned	%	Number Owned	%	Number Owned	%	Number Owned	%	Number Owned	%
Tunduru	2,895	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Songea Rural	652	0.3	0	0.0	1,792	0.7	4,072	1.6	814	0.3	1,140	0.5
Mbinga	0	0.0	8,673	1.6	0	0.0	0	0.0	5,163	1.0	4,750	0.9
Songea Urban	0	0.0	0	0.0	0	0.0	0	0.0	208	0.4	119	0.2
Namtumbo	0	0.0	0	0.0	175	0.1	0	0.0	437	0.2	350	0.2
Total	3,547	0.3	8,673	0.6	1,966	0.1	4,072	0.3	6,622	0.5	6,358	0.5

IRRIGATION

6.5: Number of Agriculture Households reporting use of Irrigation during 2007/08 agricultural Year by District

District	Households practicing irrigation		Households not practicing irrigation		Total Number of Households	
	Number	%	Number	%	Number	%
Tunduru	1,448	2.7	51,851	97.3	53,299	100
Songea Rural	4,479	13.6	28,504	86.4	32,983	100
Mbinga	7,847	9.4	75,789	90.6	83,636	100
Songea Urban	1,665	22.0	5,917	78.0	7,582	100
Namtumbo	3,060	9.3	29,722	90.7	32,781	100
Total	18,499	8.8	191,782	91.2	210,281	100

6.6: Number of Agriculture Households using irrigation by Source of Irrigation Water by District during the 2007/08 agricultural Year

District	Main Source of Irrigation Water							Total
	River	Borehole	Lake	Canal	Dam	Tap Water	Well	
Tunduru	658	0	0	395	0	132	0	1,184
Songea Rural	3,176	0	0	163	0	814	0	4,153
Mbinga	4,750	0	207	413	207	1,652	0	7,228
Songea Urban	1,070	30	30	238	0	268	0	1,635
Namtumbo	3,060	0	0	0	0	0	0	3,060
Total	12,714	30	236	1,209	207	2,866	0	17,260

6.7: Number of Agriculture Households by method of used to obtain water and District during 2007/08 agriculture year

District	Main method of Obtaining Water					Total
	Gravity	Hand bucket	Hand pump	motor pump	Other	
Tunduru	395	790	0	0	0	1,184
Songea Rural	2,525	1,466	163	0	0	4,153
Mbinga	1,652	5,369	0	207	0	7,228
Songea Urban	803	743	59	0	30	1,635
Namtumbo	2,710	350	0	0	0	3,060
Total	8,084	8,718	222	207	30	17,260

EROSION CONTROL

6.8: Number of Households with Soil Erosion Problem on their Land By District

District	Have any erosion problem on their farming land		Do not have any erosion problem on their farming land		Total	
	Number	%	Number	%	Number	%
Tunduru	2,764	5.2	50,535	94.8	53,299	100.0
Songea Rural	3,746	11.4	29,236	88.6	32,983	100.0
Mbinga	8,260	9.9	75,376	90.1	83,636	100.0
Songea Urban	981	12.9	6,601	87.1	7,582	100.0
Namtumbo	2,885	8.8	29,896	91.2	32,781	100.0
Total	18,636	8.9	191,645	91.1	210,281	100.0

6.9: Number of Households with Erosion Control/Water Harvesting Facilities on their Land By District

District	Presence of Erosion Control/Water Harvesting Facilities					
	Have any erosion control/water harvesting facilities		Do not have any erosion control/water harvesting facilities		Total	
	Number	%	Number	%	Number	%
Tunduru	526	1.0	52,772	99.0	53,299	100.0
Songea Rural	3,176	9.6	29,807	90.4	32,983	100.0
Mbinga	4,750	5.7	78,887	94.3	83,636	100.0
Songea Urban	505	6.7	7,076	93.3	7,582	100.0
Namtumbo	1,748	5.3	31,033	94.7	32,781	100.0
Total	10,706	5.1	199,575	94.9	210,281	100.0

6.10: Number of Erosion Control/Water Harvesting Structures by Type and District as of 2007/08 Agriculture year

District	Terraces	Erosion Control Bunds	Gabions / Sandbag	Vetiver Grass	Tree Belts	Water Harvesting Bunds	Drainage Ditches	Others
Tunduru	0	0	0	0	3,948	263	526	0
Songea Rural	641,166	17,509	0	0	407	0	163	0
Mbinga	3,511	1,652	0	2,272	10,325	0	5,989	413
Songea Urban	1,070	833	0	30	0	0	89	178
Namtumbo	1,311	612	262	116,438	874	787	612	4,895
Total	647,059	20,606	262	118,740	15,555	1,050	7,379	5,487

AGRICULTURE CREDIT

7.1: Number of Agriculture Households receiving Credit by District During the 2007/08 Agriculture Year

District	Households Receiving Credit					
	borrowed money for agriculture		Did not borrow money for agriculture		Total	
	Number	%	Number	%	Number	%
	Borrowed money for agriculture		Did not borrow money for agriculture		Total	
	Number	%	Number	%	Number	%
Tunduru	132	.2	53,167	99.8	53,299	100.0
Songea Rural	1,547	4.7	31,435	95.3	32,983	100.0
Mbinga	2,685	3.2	80,952	96.8	83,636	100.0
Songea Urban	535	7.1	7,047	92.9	7,582	100.0
Namtumbo	2,273	6.9	30,508	93.1	32,781	100.0
Total	7,172	3.4	203,109	96.6	210,281	100.0

7.2: Number of Credits by sex of the household Member receiving credit from source B and District During the 2007/08 Agriculture Year

District	Male		Female		Total	
	Number	%	Number	%	Number	%
Tunduru	0	0	132	100	132	100
Songea Rural	570	37	977	63	1,547	100
Mbinga	2,065	77	620	23	2,685	100
Songea Urban	178	33	357	67	535	100
Namtumbo	2,185	96	87	4	2,273	100
Total	4,999	70	2,173	30	7,172	100

7.3: Number of Households receiving Credits by Main Source of credit and District During the 2007/08 Agriculture Year

District	Family, friend or relative		Bank		Savings & credit Soc		Cooperative		Savings & credit Soc		Trader/trade store		NGO/Development Project		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	132	100.0	132	100
Songea Rural	81	5.3	0	0.0	244	15.8	407	26.3	0	0.0	81	5.3	733	47.4	1,547	100
Mbinga	620	23.1	413	15.4	620	23.1	0	0.0	620	23.1	413	15.4	0	0.0	2,685	100
Songea Urban	30	5.6	0	0.0	89	16.7	208	38.9	0	0.0	0	0.0	208	38.9	535	100
Namtumbo	0	0.0	87	3.8	1,923	84.6	87	3.8	0	0.0	0	0.0	175	7.7	2,273	100
Total	731	10.2	500	7.0	2,876	40.1	703	9.8	703	9.8	620	8.6	1,166	16.3	7,172	102

7.4: Number of Households Reporting the Main reasons for Not Using Credit by District During the 2007/08 Agriculture Year

District	Not needed		Not available		Did not want to go into debt		Interest rate/cost too high		Did not know how to get credit		Difficult bureaucratic procedure		Credit granted too late		Other (specify)		Dont know about credit		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	790	1.5	14,871	28.0	1,579	3.0	395	0.7	25,004	47.0	1,184	2.2	790	1.5	0	0.0	8,554	16.1	53,167	100
Songea Rural	3,095	9.8	5,864	18.7	9,610	30.6	2,850	9.1	5,131	16.3	2,606	8.3	977	3.1	0	0.0	1,303	4.1	31,435	100
Mbinga	5,163	6.4	9,706	12.0	10,945	13.5	5,576	6.9	33,868	41.8	6,195	7.7	826	1.0	207	0.3	8,467	10.5	80,952	100
Songea Urban	446	6.3	505	7.2	1,457	20.7	624	8.9	2,349	33.3	327	4.6	89	1.3	30	0.4	1,219	17.3	7,047	100
Namtumbo	3,497	11.5	7,693	25.2	4,283	14.0	2,885	9.5	7,081	23.2	3,759	12.3	87	0.3	262	0.9	962	3.2	30,508	100
Total	12,990	6.4	38,639	19.0	27,874	13.7	12,330	6.1	73,432	36.2	14,072	6.9	2,770	1.4	498	0.2	20,505	10.1	203,109	100

7.5: Number of Households receiving Credits by Main Source of credit B and District During the 2007/08 Agriculture Year

District	Family, friend or relative		Bank		Savings & credit Soc		Cooperative		Savings & credit Soc		Trader/trade store		Private individual		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
Songea Rural	0	0.0	0	0.0	81	100.0	0	0.0	0	0.0	0	0.0	0	0.0	81	100
Mbinga	207	33.3	0	0.0	0	0.0	207	33.3	207	33.3	0	0.0	0	0.0	620	100
Songea Urban	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
Namtumbo	175	40.0	87	20.0	87	20.0	0	0.0	0	0.0	0	0.0	87	20.0	437	100
Total	381	33.5	87	7.7	169	14.8	207	18.1	207	18.1	0	0.0	87	7.7	1,138	100

7.6: Number of Households receiving Credits by Main Source of credit C and District During the 2007/08 Agriculture Year

District	Family, friend or relative		Bank		Savings & credit Soc		Cooperative		Savings & credit Soc		Trader/trade store		Private individual		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
Songea Rural	0	0.0	0	0.0	81	100.0	0	0.0	0	0.0	0	0.0	0	0.0	81	100
Mbinga	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
Songea Urban	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0
Namtumbo	0	0.0	0	0.0	175	100.0	0	0.0	0	0.0	0	0.0	0	0.0	175	100
Total	0	0.0	0	0.0	256	100.0	0	0.0	0	0.0	0	0.0	0	0.0	256	100

7.7: Provision of credit A by sex and District During the 2007/08 Agriculture Year

District	Male		Female		Total	
	Number	%	Number	%	Number	%
Tunduru	0	78	132	22	132	100
Songea Rural	570	61	977	39	1,547	100
Mbinga	2,065	74	620	26	2,685	100
Songea Urban	178	54	357	46	535	100
Namtumbo	2,185	81	87	19	2,273	100
Total	4,999	70	2,173	30	7,172	100

7.8 : Provision of credit B by sex and District During the 2007/08 Agriculture Year

District	Male		Female		Total	
	Number	%	Number	%	Number	%
Tunduru	0	68	0	32	0	100
Songea Rural	163	34	0	66	163	100
Mbinga	413	44	207	56	620	100
Songea Urban	0	0	0	0	0	100
Namtumbo	350	67	87	33	437	100
Total	926	56	294	44	1,219	100

7.9 : Provision of credit C by sex and District During the 2007/08 Agriculture Year

District	Male		Female		Total	
	Number	%	Number	%	Number	%
Tunduru	0	0	0	0	0	0
Songea Rural	81	30	0	70	81	100
Mbinga	207	100	207	0	413	100
Songea Urban	0	58	0	42	0	100
Namtumbo	87	60	87	40	175	100
Total	375	56	294	44	669	100

CROP EXTENSION

8.1: Number of households receiving extension advice by District during the 2007/08 agriculture year

District	Number of Households that received Extension advices		Number of Households NOT received Extension advices		Total Number of Households	
	Number	%	Number	%	Number	%
Tunduru	28,689	54	24,610	46	53,299	100
Songea Rural	22,396	68	10,587	32	32,983	100
Mbinga	40,682	49	42,954	51	83,636	100
Songea Urban	6,184	82	1,397	18	7,582	100
Namtumbo	20,368	62	12,413	38	32,781	100
Total	118,320	56	91,961	44	210,281	100

8.2: Number of Households receiving advice (overall) By Source of Extension and District during the 2007/08 agriculture year

District	Source of Crop Extension															
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/Television/NewsPaper		Neighbour		Other (Specify)		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	23,294	81	3,158	11.0	263	0.9	3,553	12.4	8,554	29.8	9,607	33.5	132	0.5	28,689	100
Songea Rural	21,093	94	1,384	6.2	489	2.2	163	0.7	3,339	14.9	1,873	8.4	652	2.9	22,396	100
Mbinga	32,216	79	2,065	5.1	0	0.0	620	1.5	4,956	12.2	9,499	23.4	207	0.5	40,682	100
Songea Urban	5,530	89	892	14.4	89	1.4	595	9.6	1,516	24.5	1,606	26.0	89	1.4	6,184	100
Namtumbo	17,396	85	2,710	13.3	4,109	20.2	787	3.9	2,535	12.4	2,360	11.6	262	1.3	20,368	100
Total	99,528	84	10,210	8.6	4,950	4.2	5,717	4.8	20,901	17.7	24,945	21.1	1,341	1.1	118,320	100

8.3 : Number of Agriculture Households Participated in Out Grower Agreement During the 2007/08 Agriculture Year

District	Number of Households Participated in Out Grower Agreement		Number of Households NOT Participated in Out Grower Agreement		Total Number of Households	
	Number	%	Number	%	Number	%
Tunduru	132	0.2	53,167	99.8	53,299	100
Songea Rural	244	0.7	32,738	99.3	32,983	100
Mbinga	1,239	1.5	82,397	98.5	83,636	100
Songea Urban	30	0.4	7,552	99.6	7,582	100
Namtumbo	1,136	3.5	31,645	96.5	32,781	100
Total	2,781	1.3	207,500	98.7	210,281	100

8.4 : Number of Agriculture Households Participated in Contract Production Agreement During the 2007/08

District	Number of Hholds Participated in Production Agreement		Number of Hholds NOT Participated in Production Agreement		Total	
	Number	%	Number	%	Number	%
Tunduru	0	.0	53,299	100.0	53,299	100.0
Songea Rural	244	.7	32,738	99.3	32,983	100.0
Mbinga	0	.0	83,636	100.0	83,636	100.0
Songea Urban	89	1.2	7,493	98.8	7,582	100.0
Namtumbo	3,322	10.1	29,459	89.9	32,781	100.0
Total	3,655	1.7	206,626	98.3	210,281	100.0

8.5: Number of households receiving extension advice on Spacing by District during the 2007/08 agriculture year

District	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/Television/NewsPaper		Neighbour		Other (Specify)		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	13,818	66.5	0	0.0	0	0.0	2,500	12.0	1,842	8.9	2,632	12.7	0	0.0	20,793	100.0
Songea Rural	17,021	89.7	163	0.8	163	0.9	81	0.4	489	2.6	733	3.9	326	1.7	18,975	100.0
Mbinga	23,336	72.9	826	2.6	0	0.0	0	0.0	3,098	9.7	4,750	14.8	0	0.0	32,009	100.0
Songea Urban	4,727	84.6	208	3.7	0	0.0	89	1.6	357	6.4	208	3.7	0	0.0	5,590	100.0
Namtumbo	12,151	76.0	699	4.4	1,573	9.8	87	0.5	1,049	6.6	437	2.7	0	0.0	15,997	100.0
Total	71,053	76.1	1,896	2.0	1,736	1.9	2,758	3.0	6,834	7.3	8,760	9.4	326	0.3	93,364	100.0

8.6: Number of households receiving extension advice on Use of Agrochemicals by District during the 2007/08 agriculture year

District	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/Television/NewsPaper		Neighbour		Other (Specify)		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	10,528	61.1	395	2.3	0	.0	2,237	13.0	2,369	13.7	1,711	9.9	0	.0	17,240	100.0
Songea Rural	5,538	79.1	163	2.3	326	4.7	0	.0	407	5.8	326	4.7	244	3.5	7,004	100.0
Mbinga	17,140	70.3	1,652	6.8	0	.0	0	.0	2,478	10.2	2,891	11.9	207	.8	24,368	100.0
Songea Urban	3,330	84.2	268	6.8	0	.0	59	1.5	238	6.0	59	1.5	0	.0	3,954	100.0
Namtumbo	6,731	60.2	524	4.7	2,448	21.9	87	.8	787	7.0	524	4.7	87	.8	11,189	100.0
Total	43,267	67.9	3,002	4.7	2,773	4.4	2,384	3.7	6,279	9.8	5,512	8.6	538	.8	63,755	100.0

8.7: Number of households receiving extension advice on Erosion Control by District during the 2007/08 agriculture year

District	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/Television/NewsPaper		Neighbour		Other (Specify)		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	2,764	39.6	0	.0	0	.0	1,974	28.3	1,448	20.8	790	11.3	0	.0	6,975	100.0
Songea Rural	4,398	80.6	489	9.0	0	.0	0	.0	326	6.0	163	3.0	81	1.5	5,456	100.0
Mbinga	15,282	76.3	1,033	5.2	0	.0	0	.0	2,478	12.4	1,239	6.2	0	.0	20,031	100.0
Songea Urban	2,349	75.2	208	6.7	0	.0	178	5.7	208	6.7	149	4.8	30	1.0	3,122	100.0
Namtumbo	4,283	55.1	1,224	15.7	1,136	14.6	175	2.2	787	10.1	87	1.1	87	1.1	7,780	100.0
Total	29,075	67.0	2,953	6.8	1,136	2.6	2,327	5.4	5,246	12.1	2,428	5.6	199	.5	43,365	100.0

8.8: Number of households receiving extension advice on Organic Fertilizer use by District during the 2007/08 agriculture year

District	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/Television/NewsPaper		Neighbour		Other (Specify)		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	5,922	43.3	132	1.0	0	.0	1,842	13.5	3,027	22.1	2,764	20.2	0	.0	13,687	100.0
Songea Rural	7,329	69.2	733	6.9	81	.8	0	.0	1,303	12.3	896	8.5	244	2.3	10,587	100.0
Mbinga	21,684	73.4	1,033	3.5	0	.0	620	2.1	2,685	9.1	3,511	11.9	0	.0	29,531	100.0
Songea Urban	3,092	71.2	387	8.9	0	.0	59	1.4	387	8.9	387	8.9	30	.7	4,341	100.0
Namtumbo	5,857	64.4	524	5.8	1,049	11.5	175	1.9	1,136	12.5	262	2.9	87	1.0	9,091	100.0
Total	43,884	65.3	2,808	4.2	1,130	1.7	2,696	4.0	8,537	12.7	7,819	11.6	361	.5	67,237	100.0

8.9: Number of households receiving extension advice on use of Inorganic Fertilizer by District during the 2007/08 agriculture year

District	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/Television/NewsPaper		Neighbour		Other (Specify)		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	14,476	43.3	263	1.0	0	.0	1,842	13.5	2,500	22.1	1,842	20.2	132	.0	21,056	100.0
Songea Rural	16,695	69.2	244	6.9	244	.8	0	.0	977	12.3	326	8.5	326	2.3	18,812	100.0
Mbinga	20,857	73.4	1,446	3.5	0	.0	207	2.1	1,239	9.1	2,685	11.9	0	.0	26,433	100.0
Songea Urban	4,341	71.2	238	8.9	30	.0	89	1.4	416	8.9	119	8.9	30	.7	5,263	100.0
Namtumbo	12,151	64.4	787	5.8	2,360	11.5	437	1.9	1,136	12.5	699	2.9	0	1.0	17,571	100.0
Total	68,520	65.3	2,978	4.2	2,634	1.7	2,575	4.0	6,269	12.7	5,671	11.6	487	.5	89,135	100.0

8.10: Number of households receiving extension advice on Use of Improved Seeds by District during the 2007/08 agriculture year

District	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/Television/NewsPaper		Neighbour		Other (Specify)		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	6,712	54.8	132	1.1	132	1.1	1,974	16.1	1,842	15.1	1,448	11.8	0	.0	12,239	100.0
Songea Rural	15,148	90.3	407	2.4	244	1.5	0	.0	814	4.9	163	1.0	0	.0	16,776	100.0
Mbinga	22,097	85.6	1,239	4.8	0	.0	0	.0	413	1.6	2,065	8.0	0	.0	25,814	100.0
Songea Urban	3,687	77.0	119	2.5	0	.0	178	3.7	357	7.5	387	8.1	59	1.2	4,787	100.0
Namtumbo	11,714	73.6	524	3.3	1,836	11.5	262	1.6	1,311	8.2	262	1.6	0	.0	15,910	100.0
Total	59,356	78.6	2,421	3.2	2,212	2.9	2,415	3.2	4,738	6.3	4,324	5.7	59	.1	75,526	100.0

8.14: Number of households receiving extension advice on Vermin Control by District during the 2007/08 agriculture year

District	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/Television/NewsPaper		Neighbour		Other (Specify)		Total	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Tunduru	2,500	26.4	2,237	23.6	0	.0	2,237	23.6	1,316	13.9	1,184	12.5	0	.0	9,475	100
Songea Rural	3,502	78.2	244	5.5	81	1.8	0	.0	244	5.5	326	7.3	81	1.8	4,479	100
Mbinga	10,325	76.9	826	6.2	0	.0	0	.0	1,239	9.2	1,033	7.7	0	.0	13,423	100
Songea Urban	2,438	72.6	149	4.4	0	.0	59	1.8	297	8.8	387	11.5	30	.9	3,360	100
Namtumbo	5,769	70.2	175	2.1	699	8.5	175	2.1	699	8.5	699	8.5	0	.0	8,217	100
Total	24,535	63.0	3,631	9.3	781	2.0	2,472	6.3	3,796	9.7	3,629	9.3	111	.3	38,955	100

AGRICULTURE CONSTRAINTS

Cont. 9. 1: Number of Agricultural Households Reporting the FIRST most important Constraint by District, 2007/08 Agricultural Year

District	Constraint							
	Crop Storage		Crop Processing		Marketing Information		Higher Transport Costs	
	Number	%	Number	%	Number	%	Number	%
Tunduru	0	0.00	0	0.00	0	0.00	0	0.00
Songea Rural	0	0.00	163	0.49	163	0.49	0	0.00
Mbinga	0	0.00	0	0.00	0	0.00	207	0.25
Songea Urban	30	0.39	0	0.00	30	0.39	0	0.00
Namtumbo	0	0.00	0	0.00	262	0.80	0	0.00
Total	30	0.01	163	0.08	455	0.22	207	0.10

Cont. 9.1: Number of Agricultural Households Reporting the FIRST most important Constraint by District, 2007/08 Agricultural Year

District	Constraint							
	Destruction by Animals		Stealing		Pest and Disease		Local Government Taxation	
	Number	%	Number	%	Number	%	Number	%
Tunduru	1,448	2.72	0	0.00	1,579	2.96	0	0.00
Songea Rural	1,710	5.19	244	0.74	326	0.99	326	.980
Mbinga	1,652	1.98	826	0.99	3,304	3.95	0	0.00
Songea Urban	0	0.00	178	2.35	89	1.18	0	0.00
Namtumbo	87	0.27	262	0.80	0	0.00	0	0.00
Total	4,897	2.33	1,511	0.72	5,298	2.52	326	.15

Cont. 9.1: Number of Agricultural Households Reporting the FIRST most important Constraint by District, 2007/08 Agricultural Year

District	Constraint					
	Extended dry spell		Crop Farmers/Livestock keepers Conflicts		Total	
	Number	%	Number	%	Number	%
Tunduru	263	0.49	0	0.00	53,299	100.00
Songea Rural	0	0.00	81	0.25	32,983	100.00
Mbinga	0	0.00	0	0.00	83,636	100.00
Songea Urban	30	0.39	0	0.00	7,582	100.00
Namtumbo	262	0.80	87	0.27	32,781	100.00
Total	555	0.26	169	0.08	210,281	100.00

9. 2: Number of Agricultural Households Reporting the SECOND most important Constraint by District, 2007/08 Agricultural Year

District	Constraint							
	Access to Land		Ownership of Land		Poor Soil Cultivation Equipment		Soil Fertility	
	Number	%	Number	%	Number	%	Number	%
Tunduru	132	.2	921	1.7	6,712	12.6	4,738	8.9
Songea Rural	407	1.2	489	1.5	6,271	19.0	3,176	9.6
Mbinga	1,652	2.0	1,859	2.2	18,379	22.0	4,543	5.4
Songea Urban	89	1.2	238	3.1	1,576	20.8	743	9.8
Namtumbo	262	.8	262	.8	10,140	30.9	2,885	8.8
Total	2,542	1.2	3,769	1.8	43,078	20.5	16,085	7.7

Cont. 9.2: Number of Agricultural Households Reporting the SECOND most important Constraint by District, 2007/08 Agricultural Year

District	Constraint							
	Access to Improved Seed		Irrigation Facilities		Access to Chemical Inputs		Cost of Inputs	
	Number	%	Number	%	Number	%	Number	%
Tunduru	3,816	7.2	3,290	6.2	5,001	9.4	15,397	29.0
Songea Rural	3,013	9.1	652	2.0	896	2.7	7,085	21.5
Mbinga	11,358	13.6	413	.5	2,891	3.5	14,456	17.3
Songea Urban	1,070	14.1	0	.0	565	7.5	1,338	17.6
Namtumbo	4,021	12.3	612	1.9	1,224	3.7	7,168	21.9
Total	23,279	11.1	4,966	2.4	10,577	5.0	45,444	21.6

Cont. 9.2: Number of Agricultural Households Reporting the SECOND most important Constraint by District, 2007/08 Agricultural Year

District	Constraint							
	Extension Services		Access to Forest Resources		Hunting and Gathering		Access to Potable Water	
	Number	%	Number	%	Number	%	Number	%
Tunduru	2,895	5.4	0	.0	0	0.00	263	.5
Songea Rural	3,013	9.1	81	.2	0	0.00	0	.0
Mbinga	9,706	11.6	207	.2	0	0.00	207	.2
Songea Urban	357	4.7	0	.0	0	0.00	119	1.6
Namtumbo	962	2.9	0	.0	0	0.00	0	.0
Total	16,933	8.1	288	.1	0	0.00	589	.3

Cont. 9.2: Number of Agricultural Households Reporting the SECOND most important Constraint by District, 2007/08 Agricultural Year

District	Constraint							
	Access to Credit		Access to Off Farm Income		Threshing		Harvesting	
	Number	%	Number	%	Number	%	Number	%
Tunduru	4,869	9.2	395	.7	0	0.00	0	0.00
Songea Rural	2,769	8.4	407	1.2	0	0.00	0	0.00
Mbinga	7,847	9.4	1,239	1.5	0	0.00	0	0.00
Songea Urban	773	10.2	89	1.2	30	.39	0	0.00
Namtumbo	2,710	8.3	437	1.3	0	0.00	0	0.00
Total	18,969	9.0	2,567	1.2	30	.01	0	0.00

Cont. 9.3: Number of Agricultural Households Reporting the THIRD Most important Constraint by District, 2007/08 Agricultural Year

District	Constraint							
	Destruction by Animals		Stealing		Pest and Disease		Local Government Taxation	
Tunduru	5,922	11.11	263	0.49	2,369	4.44	0	0.00
Songea Rural	244	0.74	1,222	3.70	1,140	3.46	244	0.74
Mbinga	1,652	1.98	2,478	2.96	4,750	5.68	0	0.00
Songea Urban	30	0.39	387	5.10	268	3.53	0	0.00
Namtumbo	1,049	3.20	1,136	3.47	962	2.93	87	0.27
Total	8,897	4.23	5,486	2.61	9,488	4.51	332	0.16

Cont. 9.3: Number of Agricultural Households Reporting the THIRD Most important Constraint by District, 2007/08 Agricultural Year

District	Constraint					
	Extended dry spell		Crop Farmers/Livestock keepers Conflicts		Total	
	Number	%	Number	%	Number	%
Tunduru	790	1.48	0	0.00	53,299	100.00
Songea Rural	244	0.74	0	0.00	32,983	100.00
Mbinga	0	0.00	0	0.00	83,636	100.00
Songea Urban	0	0.00	0	0.00	7,582	100.00
Namtumbo	87	0.27	0	0.00	32,781	100.00
Total	1,121	0.53	0	0.00	210,281	100.00

9.4: Number of Agricultural Households Reporting the FOURTH Most important Constraint by District, 2007/08 Agricultural Year

District	Constraint							
	Access to Land		Ownership of Land		Poor Soil Cultivation Equipment		Soil Fertility	
	Number	%	Number	%	Number	%	Number	%
Tunduru	263	0.49	395	0.74	2,895	5.43	2,369	4.44
Songea Rural	977	2.96	163	0.49	3,665	11.11	2,280	6.91
Mbinga	2,272	2.72	207	0.25	4,750	5.68	3,717	4.44
Songea Urban	59	0.78	0	0.00	624	8.24	327	4.31
Namtumbo	175	0.53	87	0.27	1,399	4.27	1,224	3.73
Total	3,746	1.78	852	0.40	13,333	6.34	9,917	4.72

CATTLE PRODUCTION

CATTLE MILK

CATTLE PRODUCTION

9.14: Number of Milked Cows by Category of Cattle, Season and District, During the 2007/08 Agricultural Year

District	Wet Season			Dry Season		
	Improved Breed	Indigenous	Total	Improved Breed	Indigenous	Total
Tunduru	526	921	1,448	263	790	1,053
Songea Rural	1,873	896	2,769	1,303	896	2,199
Mbinga	1,652	5,369	7,021	1,239	3,924	5,163
Songea Urban	624	535	1,160	535	416	951
Namtumbo	437	962	1,399	262	962	1,224
Total	5,113	8,683	13,796	3,603	6,987	10,590

9.15: Average milk production per cow per day, by Category of Cow, Season and District, During the 2007/08 Agricultural Year

District	Wet Season			Dry Season		
	Improved Breed	Indigenous	Total	Improved Breed	Indigenous	Total
	Mean (ltr)	Mean (lts)	Mean (lts)	Mean (lts)	Mean (lts)	Mean (lts)
Tunduru	6	2	3	4	2	2
Songea Rural	9	7	8	6	5	6
Mbinga	6	2	3	4	2	2
Songea Urban	6	7	7	5	4	5
Namtumbo	7	4	5	5	3	4
Total	7	3	5	5	2	3

9.16: Average number of days for cows on milked, by category of Cattle, Season and District, During the 2007/08 Agricultural Year

District	Wet Season			Dry Season		
	Improved Breed	Indigenous	Total	Improved Breed	Indigenous	Total
	Mean	Mean	Mean	Mean	Mean	Mean
Tunduru	210	150	170	180	135	150
Songea Rural	219	208	216	213	157	190
Mbinga	190	149	157	207	128	145
Songea Urban	242	127	196	236	149	196
Namtumbo	234	133	170	273	135	170
Total	216	151	175	218	135	163

GOAT PRODUCTION

SHEEP PRODUCTION

9.28: Number of Households Rearing Sheep by District during the 2007/08 Agriculture Year

Districts	Number of households raising or managing sheep	%	Number of households not raising or managing sheep	%	Number of agriculture households	Total livestock keeping households
Tunduru	790	1.5	52,509	98.5	53,299	3,948
Songea Rural	407	1.2	32,575	98.8	32,983	9,365
Mbinga	3,717	4.4	79,919	95.6	83,636	39,856
Songea Urban	89	1.2	7,493	98.8	7,582	2,260
Namtumbo	699	2.1	32,082	97.9	32,781	7,256
Total	5,703	2.7	204,578	97.3	210,281	62,685

9.29: Number of Sheep by Type and District as of 1st October 2008

Districts	Total			
	Number of Households	%	Total Sheep	%
Tunduru	790	13.8	3158.5	15.4
Songea Rural	407	7.1	1791.6	8.7
Mbinga	3,717	65.2	10532.0	51.3
Songea Urban	89	1.6	594.7	2.9
Namtumbo	699	12.3	4458.2	21.7
Total	5,703	100.0	20535.0	100.0

9.30: Total Number of Indigenous Sheep by Category of Sheep and District as of 1st October 2008

District	Number of Indigenous					Total
	Ram	Castrated Sheep	She Sheep	Male Lamb	She Lamb	
Tunduru	526	.	1,711	526	395	3,158
Songea Rural	489	.	896	163	244	1,792
Mbinga	2,065	.	7,228	.	1,239	10,532
Songea Urban	89	.	297	.	208	595
Namtumbo	524	262	2,098	175	1,399	4,458
Total	3,694	262	12,230	864	3,485	20,535

9.31: Number of Households rearing Sheep, Head of Sheep and Average Head per Household by Herd size During the 2007/08 Agricultural Year

District	Sheep Rearing Households	%	Head of Sheep	Average Per Household
1 - 4	3,960	69.44	8,191	2.07
5 - 9	1,451	25.44	8,869	6.11
10 - 14	292	5.12	3,476	11.90
Total	5,703	100.00	20,535	3.60

9.32: Total Number of Sheep by Breed Type as of 1st October 2008 - Ruvuma

Category	Number of Indigenous	%	Number of Improved	%	Total	%
Rams	3,694	18	0	0	3,694	18.0
She Sheep	262	1	0	0	262	1.3
Castrated Sheep	12,230	60	0	0	12,230	59.6
Male Lamb	864	4	0	0	864	4.2
Female Lamb	3,485	17	0	0	3,485	17.0
Total	20,535	100	0	0	20,535	100

PIG PRODUCTION

9.33: Number of Households Raising Pigs by District during 2007/08 Agriculture Year

District	During the 2007/2008 Agriculture Year					
	rearing Pigs		Not rearing pigs		Total	
	No of households	%	No of households	%	No of households	%
Tunduru	0	.0	53,299	100.0	53,299	100.0
Songea Rural	10,098	30.6	22,884	69.4	32,983	100.0
Mbinga	50,595	60.5	33,042	39.5	83,636	100.0
Songea Urban	1,308	17.3	6,274	82.7	7,582	100.0
Namtumbo	2,622	8.0	30,159	92.0	32,781	100.0
Total	64,624	30.7	145,657	69.3	210,281	100.0

9.34: Number of Households rearing PIG, Head of PIG and Average Head per Household by Herd size During the 2007/08 Agricultural Year -

District	PIG Rearing Households	%	Head of PIG	Average Per Household
1 - 4	54,435	84	98,587	2
5 - 9	7,355	11	46,580	6
10 - 14	2,341	4	27,539	12
15 - 19	324	1	5,504	17
30 - 39	169	0	5,066	30
Total	64,624	100	183,276	3

9.35: Total Number of Pigs by Type of Pigs and District as of 1st October 2008

District	Pig Type					Total
	Boar	Castrated Male	Sow / Gilt	Male Piglet	She Piglet	
Tunduru	0	0	0	0	0	0
Songea Rural	3,990	3,502	12,949	4,968	4,398	29,807
Mbinga	23,955	9,293	70,213	20,031	15,075	138,568
Songea Urban	565	833	2,498	595	446	4,936
Namtumbo	1,049	787	4,720	874	2,535	9,965
Total	29,560	14,414	90,380	26,468	22,454	183,276

9.36: Number of Pigs per Household by District as of 1st October 2008

District	Number of households	Number of pigs	Average per household
Tunduru	0	0	0
Songea Rural	10,098	29,807	3
Mbinga	50,595	138,568	3
Songea Urban	1,308	4,936	4
Namtumbo	2,622	9,965	4
Total	64,624	183,276	3

CHICKEN AND OTHER LIVESTOCK

PESTS AND PARASITES

9.52: Number of Livestock Rearing Households normally Encountering Foot and Mouth Disease Problems by District during 2007/08 Agriculture Year

District	Households Encountering Foot and Mouth Disease		Households NOT Encountering Foot and Mouth Disease		Not Applicable		Total	
	Number	%	Number	%	Number	%	Number	%
Tunduru	132	0	1,184	4	30,400	96	31,716	100
Songea Rural	326	1	4,072	14	23,943	84	28,341	100
Mbinga	207	0	17,553	24	54,312	75	72,072	100
Songea Urban	119	2	1,397	22	4,876	76	6,393	100
Namtumbo	699	3	2,011	8	22,204	89	24,914	100
Total	1,482	1	26,218	16	135,735	83	163,435	100

9.53: Number of Livestock Rearing Households normally Encountering Lympyskin Disease Problems by District during 2007/08 Agriculture Year

District	Households Encountering Lympyskin Disease		Households NOT Encountering Lympyskin Disease		Not Applicable		Total	
	Number	%	Number	%	Number	%	Number	%
Tunduru	132	0	1,316	4	30,137	95	31,585	100
Songea Rural	407	1	4,316	15	23,617	83	28,341	100
Mbinga	1,033	1	16,727	23	54,312	75	72,072	100
Songea Urban	59	1	1,487	23	4,846	76	6,393	100
Namtumbo	175	1	2,972	12	21,767	87	24,914	100
Total	1,806	1	26,818	16	134,679	82	163,303	100

LIVESTOCK EXTENSION

9.54: Number of households receiving extension advice by District during the 2007/08 agriculture year

District	Receiving Livestock services		Not Receiving Livestock Extension services		Total Number of Livestock keepers Household
	Number	%	Number	%	
Tunduru	12,897	42	18,161	58	31,058
Songea Rural	12,379	42	16,776	58	29,155
Mbinga	31,389	44	40,682	56	72,072
Songea Urban	4,460	68	2,052	32	6,511
Namtumbo	9,004	38	14,686	62	23,690
Total	70,129	43	92,357	57	162,486

9.55: Number of Households receiving Livestock advice (overall) By Source of Extension and District during the 2007/08 agriculture year

District	Source of Livestock Extension												Number of Household receiving Extension
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	
Tunduru	9,475	58	2,632	16	0	0.0	132	0.8	2,237	14	1,974	12	16,450
Songea Rural	11,239	78	733	5	407	2.8	0	0.0	814	6	1,303	9	14,496
Mbinga	26,640	74	1,446	4	0	0.0	0	0.0	3,304	9	4,543	13	35,933
Songea Urban	3,598	52	951	14	119	1.7	178	2.6	1,368	20	684	10	6,898
Namtumbo	8,042	81	350	4	350	3.5	87	0.9	612	6	524	5	9,965
Total	58,994	70	6,112	7	876	1.0	397	0.5	8,335	10	9,029	11	83,742

9.66: Number of households receiving extension advice on Livestock Feeds processing by District during the 2007/08 agriculture year

District	Source of Livestock Extension														Total Number of households
	Government		NGO/Dev project		Cooperative		Large scale farmer		Radio/TV/Newspapers		Neighbour		Other		
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Other (Specify)	%	
Tunduru	263	50.0	132	25.0	0	0.0	0	0.0	132	25.0	0	0.0	0	0.0	526
Songea Rural	2,687	84.6	163	5.1	0	0.0	0	0.0	163	5.1	163	5.1	0	0.0	3,176
Mbinga	8,054	88.6	826	9.1	0	0.0	0	0.0	0	0.0	207	2.3	0	0.0	9,086
Songea Urban	1,308	74.6	208	11.9	0	0.0	59	3.4	59	3.4	89	5.1	30	1.7	1,754
Namtumbo	1,573	85.7	0	0.0	0	0.0	0	0.0	262	14.3	0	0.0	0	0.0	1,836
Total	13,886	84.8	1,329	8.1	0	0.0	59	0.4	616	3.8	459	2.8	30	0.2	16,379

BEE KEEPING

9.71: Average price of Honey (Tshs/litre) by Size of Bees and District during the 2007/08 Agriculture Year

District	Sting Bee (Price per Litre)	Stingless Bee (Price per Litre)	Average Price Per Litre
Tunduru	0	0	0
Songea Rural	0	0	0
Mbinga	1,500	1,000	1,250
Songea Urban	0	0	0
Namtumbo	1,667	500	1,200
	1,565	851	1,233

9.72: Number of Agriculture Households by Location of Selling Honey and District during the 2007/08 Agriculture Year

District	Neighbour		Local market		Secondary market		Processing industry		Large scale farm
	Stingless Bee	Stingbee	Stingless Bee	Stingbee	Stingless Bee	Stingbee	Stingless Bee	Stingbee	
Tunduru	0	0	0	0	0	0	0	0	0
Songea Rural	0	0	0	0	0	0	0	0	0
Mbinga	413	413	0	0	0	0	0	0	0
Songea Urban	0	0	0	0	0	0	0	0	0
Namtumbo	87	175	0	0	0	0	0	0	0
Total	500	588	0	0	0	0	0	0	0

9.73: Number of Agriculture Households by Location of Selling Honey and District during the 2007/08 Agriculture Year

District	Trade at farm		Did not sell		Other		Total	
	Stingless Bee	Stingbee	Stingless Bee	Stingbee	Stingless Bee	Stingbee	Stingless Bee	Stingbee
Tunduru	0	0	0	0	0	0	0	0
Songea Rural	0	0	0	0	0	0	0	0
Mbinga	0	0	0	0	0	0	413	413
Songea Urban	0	0	0	0	0	0	0	0
Namtumbo	0	0	87	87	0	0	175	262
Total	0	0	87	87	0	0	588	675

HOUSEHOLD FACILITIES

10.11: Number of Agricultural Households Reporting Distance to Main Source of Drinking Water during Dry Season by District, 2007/08 Agricultural Year

District	Less than 100m	100-299 m	300-499 m	500-999 m	1-1.99 Km	2-2.99 Km	3-4.99 Km	5-9.99 Km	Total
Tunduru	11,844	13,818	3,948	5,922	17,766	0	0	53,299	53,299
Songea Rural	9,773	17,102	1,222	2,443	2,443	0	0	32,983	32,983
Mbinga	46,465	21,684	3,098	9,293	3,098	0	0	83,636	83,636
Songea Urban	2,676	446	1,784	1,784	892	0	0	7,582	7,582
Namtumbo	9,179	1,311	2,622	9,179	6,556	2,622	1,311	32,781	32,781
Total	79,936	54,361	12,674	28,621	30,755	2,622	1,311	210,281	210,281
%	38.0	25.9	6.0	13.6	14.6	1.2	0.6	100.0	100.0

10.12 : Number of Agricultural Households Reporting Time Spent to and from Main Source of Drinking Water during Dry Season by District, 2007/08 Agricultural Year

District	Less than 10 Minutes	10 - 19 Minutes	20 - 29 Minutes	30 - 39 Minutes	40 - 49 Minutes	50 - 59 Minutes	One Hour and above	Total
Tunduru	11,844	1,974	0	13,818	9,870	0	15,792	53,299
Songea Rural	7,329	10,994	7,329	4,886	1,222	1,222	0	32,983
Mbinga	46,465	6,195	3,098	27,879	0	0	0	83,636
Songea Urban	5,352	0	892	1,338	0	0	0	7,582
Namtumbo	6,556	2,622	7,867	11,801	0	0	3,934	32,781
Total	77,546	21,786	19,187	59,723	11,092	1,222	19,726	210,281
%	36.9	10.4	9.1	28.4	5.3	0.6	9.4	100.0

10.13: Number of Agricultural Households Reporting type of TOILET the household normally use by District, 2007/08 Agricultural Year

District	No Toilet / Bush	Flush Toilet	Traditional Pit Latrine	Improved Pit Latrine - hh Owned	Other Type	Total
Tunduru	263	526	51,588	921	0	53,299
Songea Rural	81	570	30,377	1,955	0	32,983
Mbinga	207	620	77,441	5,369	0	83,636
Songea Urban	89	178	6,065	1,249	0	7,582
Namtumbo	262	175	29,896	2,448	0	32,781
Total	903	2,069	195,368	11,941	0	210,281
%	0.4	1.0	92.9	5.7	0.0	100.0

10.14: Number of Agricultural Households Reporting Number of meals the household normally has per day by District, 2007/08 Agricultural Year

District	One	Two	Three	Total
Tunduru	263	9,212	43,824	53,299
Songea Rural	244	7,818	24,920	32,983
Mbinga	620	34,487	48,530	83,636
Songea Urban	59	2,111	5,411	7,582
Namtumbo	87	5,944	26,749	32,781
Total	1,274	59,573	149,434	210,281
%	0.6	28.3	71.1	100.0

10.15 : Number of Agricultural Households Reporting Number of days the household Consumed Meat during the Preceding Week by District, 2007/08 Agricultural Year

District	Not Eaten	One	Two	Three	Four	Five	Six	Seven	Total
Tunduru	32,506	14,739	3,553	1,579	395	263	0	263	53,299
Songea Rural	10,180	15,148	5,864	1,710	81	0	0	0	32,983
Mbinga	15,901	32,629	20,444	11,358	2,272	413	413	207	83,636
Songea Urban	2,914	3,181	1,041	297	59	89	0	0	7,582
Namtumbo	12,238	13,550	5,595	1,049	175	87	0	87	32,781
Total	73,739	79,246	36,497	15,994	2,982	853	413	557	210,281
%	35.1	37.7	17.4	7.6	1.4	0.4	0.2	0.3	100.0

10.16: Number of Agricultural Households Reporting Number of days the household Consumed Fish during the Preceding Week by District, 2007/08 Agricultural Year

District	Not Eaten	One	Two	Three	Four	Five	Six	Seven	Total
Tunduru	13,687	16,450	12,107	4,869	3,027	1,316	263	1,579	53,299
Songea Rural	3,583	10,994	7,492	6,597	2,687	1,140	326	163	32,983
Mbinga	5,163	17,966	15,695	15,282	7,228	3,511	7,021	11,771	83,636
Songea Urban	1,576	2,141	1,397	1,279	535	446	178	30	7,582
Namtumbo	6,119	9,616	6,818	5,245	3,671	787	262	262	32,781
Total	30,128	57,167	43,510	33,271	17,149	7,200	8,051	13,805	210,281
%	14.3	27.2	20.7	15.8	8.2	3.4	3.8	6.6	100.0







10.17: Number of Agricultural Households Reporting the status of food satisfaction of the household during the Preceding Year by District, 2007/08 Agricultural Year

District	Never	Seldom	Sometimes	Often	Always	Total
Tunduru	16,977	20,925	7,765	4,343	3,290	53,299
Songea Rural	20,604	6,678	4,642	652	407	32,983
Mbinga	49,975	19,412	9,912	2,685	1,652	83,636
Songea Urban	4,341	1,249	714	803	476	7,582
Namtumbo	16,172	10,228	4,371	1,573	437	32,781
Total	108,069	58,491	27,403	10,055	6,262	210,281
%	51.4	27.8	13.0	4.8	3.0	100.0

10.18: Number of Agricultural Households Reporting Main Source of Income by District, 2007/08 Agricultural Year

District	Sales of Food Crops	Sale of Livestock	Sale of Livestock Products	Sales of Cash Crops	Sale of Forest Products	Business Income	Wages & Salaries in Cash	Other Casual Cash Earnings	Cash Remittance	Fishing	Other	Not applicable	Total
Tunduru	42,376	0	263	2,895	790	1,711	1,579	1,842	132	132	658	921	53,299
Songea Rural	26,142	733	814	244	244	1,466	977	1,466	407	163	244	81	32,983
Mbinga	46,052	826	413	20,444	413	2,272	1,652	3,304	0	5,163	826	2,272	83,636
Songea Urban	4,936	89	149	89	0	565	595	803	149	0	149	59	7,582
Namtumbo	26,050	175	437	3,322	0	787	874	437	87	0	350	262	32,781
Total	145,555	1,823	2,076	26,995	1,447	6,800	5,677	7,852	775	5,457	2,227	3,596	210,281
%	69.2	0.9	1.0	12.8	0.7	3.2	2.7	3.7	0.4	2.6	1.1	1.7	100.0

APPENDIX III QUESTIONNAIRES

United Republic of Tanzania																									
																									
																									
Small holder/Small Scale Farmer questionnaire																									
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Definition and working page for page 1

General Definitions

Who is a Smallholder /Small Scale farmer?

Should have one or more of the following: in the 2007/08 farming season had one or more cultivated and planted farms. The farm land may either be owned, rented, borrowed. The farmer may also be raising 1 and 50 head of cattle, and/or between 5 and 100 head of sheep/Goats/Pigs, and/or between 50 and 1000

Household: A group of people who occupy the whole of part one or more housing units and makes joint provision for food and/or other household items. Usually such a group comprises a husband, wife, and their children. Other relatives may be members of the household if they happen to live and get food provisions from the same household. People who live together and eat from the same pot may be considered as members of the same household even if they stay in separate dwellings. An individual who lives and eat alone is considered as an independent household.

Household Head: A person who is acknowledged by all other members of the household either by virtue of his age or standing in the household as the head. He/she should be a permanent resident of the house and he/she is the main person responsible for decision making regarding use of household resources..

Agricultural Holding: This is an economic unit of agricultural production under single management. This unit may have been grown various crops. For the purpose of the survey, the agricultural holdings are restricted to those which meet one of the following conditions:

- Having or operated at least 25 sq meter of arable land
- Own or keep at least one head of cattle or five goats/sheep/five pigs or fifty chicken/ducks/turkeys during the agricultural year 2007/08 (from October 2007 to September 2008).

Question Specific Definitions:

Type of Agriculture holding Codes (Q2.1):

Crops only: A holding is referred to be a crop only holding if it has cultivated at least one piece of land. This also applies to all households owning or have kept livestock whose number does not qualify such households to be an agricultural holding (No cattle, less than 5 goats/sheep/pigs, less than 50 chickens/turkeys/rabbits).

Livestock only: A holding is referred to be a livestock only holding if it has exercised livestock husbandry only during the 2007/08 agricultural year.

NOTE

For agricultural holding only and pastoralist holding only; the number of livestock should be at least one head of cattle, not less than five goats/sheep/pigs, not less than 50 chickens /turkeys /rabbits. This also applies to households having or operated less than 25 sq meter of cultivated land (which does not qualify the household to be considered as agricultural holding) but has the number of livestock that makes the holding qualifies to be considered as livestock holding.

Pastoralist holding: This refers to a household which practices livestock production as its major income generating activity and a means of subsistence, but moves from one place to another searching for water and pasture for the livestock. This movement usually involves long distances and in many cases the whole household unit moves with the livestock and they have no permanent place of residence.

Both crops and livestock: A holding is referred to be a both crops and livestock if it has cultivated a piece of land equal or exceeding 25 sq meter and if such households have own or kept livestock whose number qualify such household be considered as an agricultural holding.

Procedures for questions:

Q.2.1 Type of agriculture household/holding

Using the options under the question classify the type of agriculture household/holding

Note: If the household had an acre of crops and raised 40 chickens during 2007/08, it is classified as 'Crops only' as the number of chickens does not qualify the household as a livestock holding.

1.0 IDENTIFICATION DETAILS		
1.1	Location	Identification <input style="width: 15px; height: 15px; margin-right: 5px;" type="text"/> <input style="width: 15px; height: 15px; margin-right: 5px;" type="text"/> <input style="width: 15px; height: 15px; margin-right: 5px;" type="text"/> <input style="width: 15px; height: 15px; margin-right: 5px;" type="text"/> <input style="width: 15px; height: 15px; margin-right: 5px;" type="text"/> <input style="width: 15px; height: 15px; margin-right: 5px;" type="text"/> <input style="width: 15px; height: 15px; margin-right: 5px;" type="text"/>
Na.	Location Name	Codes
1.1.1	Region	<input style="width: 15px; height: 15px;" type="text"/>
1.1.2	District	<input style="width: 15px; height: 15px;" type="text"/>
1.1.3	Ward	<input style="width: 15px; height: 15px;" type="text"/> <input style="width: 15px; height: 15px;" type="text"/>
1.1.4	Village	<input style="width: 15px; height: 15px;" type="text"/> <input style="width: 15px; height: 15px;" type="text"/>
1.2 Deetails of the respondent or household head		
Na.		Codes
1.2.1	Name and number of local leader	<input style="width: 15px; height: 15px;" type="text"/> <input style="width: 15px; height: 15px;" type="text"/>
1.2.2	Name and number of household head	<input style="width: 15px; height: 15px;" type="text"/> <input style="width: 15px; height: 15px;" type="text"/>
1.2.3	Sex of household head	<input style="width: 15px; height: 15px;" type="text"/>
1.2.4	Name of respondent	
1.2.5	Relationship of Respondent to household head	<input style="width: 15px; height: 15px;" type="text"/>
<p><u>Relationship to household head codes (Q 1.2.5)</u></p> <p>Head of Household1 Son /Daughter.....3 Grandson/Granddaughter.....5 No relationship.....7</p> <p>Spouse.....2 Father/Mother.....4 Other relatives.....6</p>		
2.0 ACTIVITIES OF THE HOUSEHOLD		
2.1	Typeof Agriculture Household	<input style="width: 15px; height: 15px;" type="text"/> <input style="width: 15px; height: 15px;" type="text"/>
<p><u>Household agricultural activities codes(Q 2.1)</u></p> <p>Crops only.....1 Livestock only2 Pastoralist.....3 Crops and Livestock4</p>		

Definition and working page for page 2

Question Specific Definitions:

Relation to head (Col 2):

Household Head: A person who is acknowledged by all other members of the household either by virtue of their age or standing as the household head.
--

Read and Write (Col 8)

Any other language: Must be a written language.
--

For someone who can read and write in Kiswahili and any other language apart from English, the correct code is 1. For one who can read and write in English and any other language apart from Kiswahili the the correct code is 2. Code 4 should only be used for any other language which is not English or Kiswahili.

Education Level Reached (Col 10):
--

Ask the respondent the highest educational level reached. This aims at establishing whether at the time of enumeration the member of the household is studying has completed or has never studied. Make further enquiry for the level of education reached for those who have completed studies. Establish if the member had attained any training after graduation for the purposes for completing column number 9. For those who still continue attending studies during the period of this survey, establish their learning stage. For instance for a household member who studied up to Standard Three but did not complete his/her education at this level, then his/her highest education level reached is Standard Two. For those indicated under code 3 (not studied) in column 8 should be marked code 99 (Not applicable) in column 9.
--

Section 3.0 Note

Make sure that you define the hh proper to ensure that all the members of the hh are included. Ensure that you stress that the hh is not just the hh heads direct family and that it includes other people living and eating together with the family.
--

If you notice that the hh is large or you see many people around the hh and you have been given a smaller number of the hh members, make further enquiries until you are sure that you have captured all the hh members.
--

Section 3.0 Household information.

- | |
|---|
| <ul style="list-style-type: none"> ii) For each household member complete columns 1,2,3 and 3
After completing columns 1, 2, 3 and 3 for each household member, go back to the first household member and complete the remaining columns for that member. iii) Repeat step 2 for the rest of the household members. |
|---|

Relationship to household head (Col 2)
 Head of household.....1
 Female/Male.....2
 Son/Daughter.....3
 Father/Mother.....4
 Grandson/daughter....5
 Other Relatives.....6

Marrital Status(Col 4)
 Married.....1
 Single.....2
 Co-habiting3
 Divorced
 Separated.....4
 Widow/widower.....5

Survival of Parents(Col 6 & 7)
 Yes.....1 No2
 Dont't know3

Education Level(Col 9)
 Studying1
 Has completed.....2
 Never been to school3

Reading and writing (Col 8)
 Kiswahili.....1
 English2
 Kiswahili and English.....3
 Lugha nyingine.....4
 Cannot tread or write.....5

Education Level (Col 10)
Primary education
 Below Standard One.....00
 Standard One01
 Standard Two.....02
 Standard Three.....03
 Standard Four.....04
 Standard Five.....05
 Standard Six06
 Standard Seven.....07
 Daras Standard Eight ..08
 Education.....19
 Training after Primary Ed...09
 Pre Form One.....10

Secondary Education
 Form One.....11
 Form Two12
 Form Three.....13
 Form Four14
 Form Five15
 Form Six16
 Training after Secondary Ed....17
 University and other Tertiary Ed...8
 Adult
 Not applicable99

Involvement in farming activities (Col 11)
 Works on farm full time.....1
 Works on farm part time.....2
 Rarely works on farm.....3
 Never works on farm..... 4

Main activity (Col 12)
 Crop farming:01.
 Livestock farming/herding: ...02.
 Pastoralist03
 Fishing04
 Fish farming05
 Paid employment /
 Government/parastal.....06
 Private/NGOs07
 Self employee (Off-farm activities)
 - With employees08
 - Without employees09
 Non paid household member (off-farm activities)10.
 Unemployed but available for work11
 Unemployed but unavailable for work..12
 House mother13
 Student14
 Unable to work too old, too young, retired, disabled, child 15
 Others (specify)98

Off-farm Income (Col 13)
 These are income made from activities NOT on the HH's farming activities. This can be from formal employment (e.g. in government etc.), temporary jobs, casual labourers and income generation activity and includes working for cash on other people's farms.
 Indicate whether each member was involved in an off farm income generating activity during 2007/08

Definitions and working page for page 3

Definitions for Key Specific Questions

Section 4.1 – Land Access/Ownership

These are areas that were used by the households for the 2007/08 farming season

Lease/Certificate of Ownership: Area under lease/certificate of ownership refers to the areas which were issued by the government. The household possesses government issued leasehold title or certificate of ownership. The land will normally be officially surveyed and boundaries marked. This includes leased land bought from others where the lease/certificate of ownership has been transferred.

Customary Law: This refers to the land which the household does not have an official government but its right of use is granted by the traditional leaders.

Bought: This refers to the areas of customary land that has been bought from others. This land does not have an official title and therefore is not leasehold.

Rented from others: Land rented from others for cash or for a fixed amount in crop produce (e.g. fixed number of bags at harvest).

Borrowed: use granted by land owner free of charge. Land owner can either be a lease holder or has right of access through customary law.

Share cropping: where the household is permitted to use land which is then paid for from a percentage of the harvested crop

Section 4.2 Land Use

Temporary crops: are sown and harvested during the same agricultural year

Permanent crops: are crops once sown or planted last for some years and need not to be replanted after each annual harvest.

Permanent crops /mixed crops: This is a mixture of permanent and seasonal crops. The two crops can either be randomly planted together or in a particular pattern e; for example intercropping (1 row of maize and 1 row of beans). A field that has been divided into plots for different crops is not mixed).

This is further subdivided into:

Mixture of Permanent crops – two or more permanent crops grown together

Mixture of Permanent and Temporary crops – permanent crop and annual crop together

Mixture of Temporary crops– two or more temporary, annual crops grown together

Pasture land: this is an area of owned/allocated land which is set aside for livestock grazing. It can be improved pasture where the farmer has planted grass, applied fertilized or where other means have been applied to improve the pasture. Or it can be natural pasture.

Natural Bush: Land which has naturally grown shrubs and trees and is considered productive but is not utilized for farming or livestock production.

Overview to section 4

Overview to section 4

Section 4.0: Preliminary note

Land Access/Ownership

Land access /ownership refers to the area utilized by the members of the household. This does not include communal land where the resources are shared between household members. It does not include official communal land that the household has sole access to for example a plot for crop farming in the communal area.

Procedures for questions

Section 4.0 – Land Ownership

1. Ask the respondent if he knows the total areas of land the household has sole access to. If he knows make a note in the calculation space
2. Ask the respondent the area of the different land ownership categories the household has sole access to (Q4.1, 1 to 4.1.7) and record in the appropriate spaces.
3. Add up the area of the different categories of land and compare it with the total area obtained in step 1 (if the respondent provided the information)
4. If the total area is different find out which one is correct and make

Section 4.2: Land Use

1. Ask the respondent the area of the different land use categories the household has sole access to (Q4.2.1 to 4.2.12) and record in the appropriate spaces.
2. Add up the area of the different categories of land and compare it with the total area obtained in section 4.0. The total area should be the same.
3. If the total area is different find out which one is correct and make amendments where appropriate.

4.0 LAND ACCESS/OWNERSHIP/TENURE		Identification <input type="text"/>	
4.1 LAND ACCESS/OWNERSHIP/TENURE			
Give details on Area owned by the household during 2007/08 agricultural season.			
Give area as reported by the respondent in acres		Area in Acre	
4.1.1	Area under certificate of ownership	<input type="text"/> . <input type="text"/>	4.1.8 Was the whole household area used during the 2007/08 agricultural season? (Yes=1, No=2) <input type="checkbox"/>
4.1.2	Area owned under customary law	<input type="text"/> . <input type="text"/>	
4.1.3	Area bought	<input type="text"/> . <input type="text"/>	4.1.9 Do you consider to have enough land for your household? (Yes=1, No=2) <input type="checkbox"/>
4.1.4	Area rented from others	<input type="text"/> . <input type="text"/>	
4.1.5	Area borrowed from others	<input type="text"/> . <input type="text"/>	4.1.10 Is there any female who owns land or has customary rights to land ownership in this household? (Yes=1, No=2) <input type="checkbox"/>
4.1.6	Area share cropped from others	<input type="text"/> . <input type="text"/>	
4.1.7	Area under other forms of tenure	<input type="text"/> . <input type="text"/>	
Total area		<input type="text"/> . <input type="text"/>	
4.2 LAND USE			
Area used by the household for various agricultural activities during 2007/08 agricultural season			
Enter area as reported by the respondent in acres		Area in acre	Working space for calculations
4.2.1	Area planted temporary monocrops	<input type="text"/> . <input type="text"/>	
4.2.2	Area planted temporary mixed crops (e.g. maize and beans)	<input type="text"/> . <input type="text"/>	
4.2.3	Area planted permanent monocrops	<input type="text"/> . <input type="text"/>	
4.2.4	Area planted permanent mixed crops (e.g. banana, coffee, trees)	<input type="text"/> . <input type="text"/>	
4.2.5	Area planted permanent and temporary mixed crops (e.g. maize and banana)	<input type="text"/> . <input type="text"/>	
4.2.6	Area under pasture	<input type="text"/> . <input type="text"/>	
4.2.7	Area under fallow	<input type="text"/> . <input type="text"/>	
4.2.8	Area under natural forest	<input type="text"/> . <input type="text"/>	
4.2.9	Area planted trees	<input type="text"/> . <input type="text"/>	
4.2.10	Area rented to others	<input type="text"/> . <input type="text"/>	
4.2.11	Area unsuitable for agriculture	<input type="text"/> . <input type="text"/>	
4.2.12	Uncultivated arable land (minus area under fallow)	<input type="text"/> . <input type="text"/>	
Total area		<input type="text"/> . <input type="text"/>	

Definitions and working page for page 5

Storage (Col. 30, Q 5.1.1):

- **Traditionally Made structures:** The design of storage structures villagers have inherited from forefathers .
- **Improved Traditionally made structures:** The design of traditional storagesrutures improved through modern technology.

Marketing Challenges Q 5.1.1 Col. 33:

- **Farmers' Association:** Village farmers who came together and started an association for the puporses of purchasing inputs/selling/storage of crops aiming at fetching better prices.
- **Cooperative Union:** A large inter-village/community set up in the district/ region or at national level for providing inputs, markets and storage of farmers' crops.
- **Government Regulatory laws for crops marketing:** Government instituted laws for regulatinq transportation and selling of crops.

Inputs (Q 5.1.1)

- Farm Yard Manure:** An organics fertiliser made on farm from animal dung. .
- Compost:** An organic fertiliser made on farm from decomposed plant materials.
- Insecticides:** This is the chemical usde in protecting plants or killing pests.
- Fungicides:** Protects plants from fungi attack.
- Herbicide:** Chemicals used to control or kills weeds.
- Improved seeds:** Scientifically attested to be suitable for agricultural use.

Questions specific definitions

Q 5.1.1. Instructions on crops storage:

1. For the listed crops establish whether or not the household stored crops for 2007/2008 agricultural season.
2. For the listed crops give explanations on storage.

Crops storage is keeping/reserving crops in a container or a special place for future use.

Q 5.1.1 Col 31

1. For each of crops listed indicate major marketing problems for 2007/2008 agricultural season.

Working area/calculation space

Definitions and working page for page 6

Working table for the calculation area for annual mixed crops

Mixed crops 1	Crop Name	Total area of mixed (acre)	Area for plants (acre)	Total number of plants	Total area of plants (acre)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*(e)
Permanent crop 1		0.000			
Permanent crop 2		0.000			
Permanent crop 3		0.000			
Permanent crop 4		0.000			
Total Area for mixed crops			Total area for permanent crops		
The remaining area for temp crops					
			% of temporary		Area for permanent crop
Name of the crop temp/permanent 1					
Name of the crop temp/permanent 2					
Name of the crop temp/permanent 3					
Check total area			Check total area for temporary crops		

Mazao mchanganyiko 2	Name of plant	Total area mix (acre)	Area for the plant (acre)	Total of plants	Total area for plants (acre)
(a)	(b)	(c)	(d)	(e)	(f)=(d)*(e)
Permanent crop 1		0.000			
Permanent crop 2		0.000			
Permanent crop 3		0.000			
Permanent crop 4		0.000			
Total area for mixed crops			Total area for permanent crops		
The remaining area for temp crops					
			% of temporary		Area for permanent crop
Name of the crop temp/permanent 1					
Name of the crop temp/permanent 2					
Name of the crop temp/permanent 3					
Check total area			Check total area for temporary crops		

Planted Area: Area in acre the household was able to plant
Harvested Area: Area in acre the household was able to harvest a large portion of harvests. This is the same as the area planted minus the area that was destroyed by floods/pets/

Temporary/Annual Crops
 Crops planted and harvested within 12 months after which time the plants die. Most annual crops are planted and harvested on a seasonal base.

Cash crop codes:
 Code Crop
 50 Cotton
 51 Tobacco
 53 Payrethrum
 62 Jute
 19 Seaweed

Crop Codes(Creal / Tubers/ Roots):
 Code Crop
 11 Maize
 12 Paddy
 13 Sorghum
 14 Buirush Millet
 15 Finger Millet
 16 Wheat
 17 Barley
 22 Sweet Potatoes
 23 Irish Potatoes
 24 Yams
 25 Cocoyams
 26 Onions
 27 Ginger

Vegetable Codes:
 Code Crop
 86 Cabbage
 87 Tomatoes
 88 Spinach
 89 Carrot
 90 Chillies
 91 Amaranths
 92 Pumpkin
 93 Cucumber
 94 Egg plant
 95 Water melon
 96 Cauliflower
 06 Melon
 05 nyanyachungu
 02 Ocra
 03 Radish
 01 Green Beans
 04 Bizani

Crop Codes Legumes and Oil
 Code Crop
 31 Beans
 32 Cowpeas
 33 Green Gram
 34 Chick Peas
 35 Dengu
 36 Bambara nuts
 37 Njegere
 41 Sun flower
 42 Simsim
 43 Ground uts
 47 Soya beans
 48 Caster Seed

Instructions for calculating the area of mixed crops in a mixture

A. If the mixed crop is mixed annual ly only enter the total area of the field in the remaining area under temporary Crop and go to step one of these instructions

B. If the mixed crop is mixed permanent and annual try to work tyhe percent age taken by the different crops and calcalet the area of annual crops outlined in step 1. Otherwise use the number of trees method to calculate the area of annula crops in the mix.

C: Number of trees method to calculate annual crop areas in a permanent-annual crop mix:

(i) List each of tyhe permanent crop in collumn b and enter the ground area per acre for each permanent crop (from instructions for page 8) in colum d.

(ii) Enter the number of permanent trees in the mix in collumn e as will be provided to you by the respondent

(iii) Calculate the area occupied by each crop by multiplying collumn d and collumn e and sum up these to obatin the total area of permanent crops in the mix.

iv) To obatin the area for temporary crops , subtract (-) the area fro permanent crops from thne total area of crop mix and enter the result in in the total area under temporary crops.

(v) Proceed to step 1 to calculate the area under each temporary crop.

1. Enter the name of each temporary crop in tyhe crop mix and estimate percentages of each crop.

2. **Using the percentage for each crop, calculate the are for each crop from the remaining area under temporary crop.**

3. After completing the excrise for all the fields, sum the area of each crop in tyhe mix plus any monocrops and uenter the totals in section 5.1.1 Collumn 3.

4. **Once the quantity harvested is obtained , calcikulate the yields (metric tonnes/acre) and compare the figures with the norms given in the crops code box. If there is significantly difference, check the area and the amount harvested..**

5.3 PERMANENT/PERENNIAL CROPS AND FRUIT TREE PRODUCTION											Identification <input type="text"/>						
Does your household have any permanent/perennial crops or fruit trees Yes =1, No = 2, (If answer is NO proceed to Section 6.0) <input type="checkbox"/>																	
5.3.1 Give details on permanent/perennial crops or fruit trees																	
Name of permanent/perennial crop	crop code of permanent/perennial crop/fruit trees	Production Section			Main crop owner: Enter the number of the hh member from page 2 on information for hh	Farm inputs											
		Monocrops	Mixed crops			Uses of seeds					Uses of Fertilisers (If 6 is the answer in col 13 proceed to col. 17)						
		Area for trees/seedling/branch/bushes	Area for mixed crops (Acre)	Number of Tplants/ trees in the crop mix of permanent and perennial crop		Irrigation	Area used	The type of fertiliser used	Quantity of fertiliser (kg)	Cost (Ths)	Size	Cost (Ths)	Irrigation	Area used	The type of fertiliser used	Quantity of fertiliser (kg)	Cost (Ths)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)		
.....																	
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.....																	
.....																	

Type of seed planted (Col 7)

Local seeds.....1

Improved seeds.....2

Don't know/ Not applicable...3

Main crop owner (Col 6):

Enter the number of the hh member from page 2 on information for hh members in Q 3

Area cultivated (col. 8)

For the whole crop.....1

3/4 of the whole crop.....2

1/2 of tyhe whole crop.....3

1/4 ofd the whole crop.....4

Under 1/4 of the whole crop.....

Qunatity (Col 9)

Kg1

Seedlings...2

Gram.....3

Use of farm inputs (Col 12 & 13)

For the whole crop.....1

3/4 of the wholecrop.....2

1/2 of tyhe whole crop.....3

1/4 ofd the whole crop.....4

Under 1/4 of the whole crop...5

Not used.....6

Type of fertilsers (Col 14)

Organic fertilser... ..1

Definitions and working page for page 8																																																																																																																																															
<p>Permanent Crops: These are crops once planted last longer in the farm and need not be replanted after each annual harvest. Most of the permanent plants include tress such as coconut tress, apple trees, grape trees, banana trees, pineapple trees etc.</p> <p>Number of Trees: These include manure trees and premature trees.</p> <p>Number of mature plants: A total of fruit bearing tress (e.g. mango trees, orange trees, avocado trees e.t.c).</p> <p>Instructions for permanent monocrops and crop mix: A. For a field with permanent monocrop enter farm size in collumn. 3. B. For a field with a permanent crop mix or a temporary crop mix, enter the number of trees only in collumn 4. C. For a field with a permanent crop mix /temporary annual crops , either: -Enter the area in collumn 4, if the total arae for permanent crops was obtained through calcaulion of percentages of each crop OR Enter the number of tree in collumn 5, if the number of plants/ seedlings of permanent crops was excluded</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>21 Cassava: Cassava is a temporary crop, in order to simplify data collection on areas of production, data on cassava will be collected from areas under permanent crops.</p> </div>	<p>Permanent crops:(crop oils)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Code</th> <th>Crop</th> <th>Area per crop</th> </tr> </thead> <tbody> <tr><td>44</td><td>Palm Trees</td><td>0.00049</td></tr> <tr><td>45</td><td>Coconut tree</td><td>0.00037</td></tr> <tr><td>46</td><td>Cashew nut tress</td><td>0.00062</td></tr> </tbody> </table> <p>Permanent crops (Cash crops)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Code</th> <th>Crop</th> <th>Area per crop</th> </tr> </thead> <tbody> <tr><td>53</td><td>Sisal</td><td>0.00012</td></tr> <tr><td>54</td><td>Coffee</td><td>0.00049</td></tr> <tr><td>55</td><td>Tea</td><td>0.00037</td></tr> <tr><td>56</td><td>Cocoa</td><td>0.00049</td></tr> <tr><td>57</td><td>Rubber</td><td>0.00099</td></tr> <tr><td>58</td><td>Wattle</td><td>0.00099</td></tr> <tr><td>59</td><td>Kapok</td><td>0.00124</td></tr> <tr><td>60</td><td>Sugar-cane</td><td>0.00012</td></tr> <tr><td>61</td><td>Cardamon</td><td>0.00049</td></tr> <tr><td>63</td><td>Tamarin</td><td>0.00099</td></tr> <tr><td>64</td><td>Cinarmon</td><td>0.00124</td></tr> <tr><td>65</td><td>Nutmeg</td><td>0.00099</td></tr> <tr><td>66</td><td>Clove</td><td>0.00074</td></tr> <tr><td>18</td><td>Black pepper</td><td>0.00037</td></tr> <tr><td>34</td><td>Pigeon Peas</td><td>0.00025</td></tr> <tr><td>21</td><td>Cassava</td><td>0.00019</td></tr> <tr><td>75</td><td>Pineapple</td><td>0.00006</td></tr> <tr><td>86</td><td>Lemon Grass</td><td></td></tr> </tbody> </table>	Code	Crop	Area per crop	44	Palm Trees	0.00049	45	Coconut tree	0.00037	46	Cashew nut tress	0.00062	Code	Crop	Area per crop	53	Sisal	0.00012	54	Coffee	0.00049	55	Tea	0.00037	56	Cocoa	0.00049	57	Rubber	0.00099	58	Wattle	0.00099	59	Kapok	0.00124	60	Sugar-cane	0.00012	61	Cardamon	0.00049	63	Tamarin	0.00099	64	Cinarmon	0.00124	65	Nutmeg	0.00099	66	Clove	0.00074	18	Black pepper	0.00037	34	Pigeon Peas	0.00025	21	Cassava	0.00019	75	Pineapple	0.00006	86	Lemon Grass		<p>Permanent crops:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Code</th> <th>Crop</th> <th>Area per crop</th> </tr> </thead> <tbody> <tr><td>70</td><td>Passion Fruit</td><td>0.00074</td></tr> <tr><td>71</td><td>Bananas</td><td>0.00037</td></tr> <tr><td>72</td><td>Avocado</td><td>0.00099</td></tr> <tr><td>73</td><td>Mango</td><td>0.00099</td></tr> <tr><td>74</td><td>Pawpaw</td><td>0.00037</td></tr> <tr><td>76</td><td>Orange</td><td>0.00074</td></tr> <tr><td>77</td><td>Grape fruit</td><td>0.00074</td></tr> <tr><td>78</td><td>Grape</td><td>0.00012</td></tr> <tr><td>79</td><td>Mandarin</td><td>0.00074</td></tr> <tr><td>80</td><td>Guava .</td><td>0.00074</td></tr> <tr><td>81</td><td>Plums</td><td>0.00074</td></tr> <tr><td>82</td><td>Apples</td><td>0.00074</td></tr> <tr><td>83</td><td>Peaches</td><td>0.00074</td></tr> <tr><td>84</td><td>Mifyoksi</td><td>0.00074</td></tr> <tr><td>85</td><td>Lime/lemon</td><td>0.00074</td></tr> <tr><td>68</td><td>Pomelo</td><td>0.00099</td></tr> <tr><td>69</td><td>Jack Fruit</td><td>0.00074</td></tr> <tr><td>97</td><td>Durian</td><td>0.00074</td></tr> <tr><td>98</td><td>Bilimbi</td><td>0.00074</td></tr> <tr><td>99</td><td>Rambutan</td><td>0.00074</td></tr> <tr><td>67</td><td>Bread Fruit</td><td>0.00099</td></tr> <tr><td>38</td><td>Malay apple</td><td>0.00074</td></tr> <tr><td>39</td><td>Star Fruit (Sakua)</td><td>0.00074</td></tr> </tbody> </table>	Code	Crop	Area per crop	70	Passion Fruit	0.00074	71	Bananas	0.00037	72	Avocado	0.00099	73	Mango	0.00099	74	Pawpaw	0.00037	76	Orange	0.00074	77	Grape fruit	0.00074	78	Grape	0.00012	79	Mandarin	0.00074	80	Guava .	0.00074	81	Plums	0.00074	82	Apples	0.00074	83	Peaches	0.00074	84	Mifyoksi	0.00074	85	Lime/lemon	0.00074	68	Pomelo	0.00099	69	Jack Fruit	0.00074	97	Durian	0.00074	98	Bilimbi	0.00074	99	Rambutan	0.00074	67	Bread Fruit	0.00099	38	Malay apple	0.00074	39	Star Fruit (Sakua)	0.00074
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Definitions and working page for page 9

Storage (Col. 33, Q 5.3.1):

- **Traditionally Made structures:** The design of storage structures villagers have inherited from forefathers .
- **Improved Traditionally made structures:** The design of traditional storagesrutures improved through modern technology.

Marketing Challenges Q 5.3.1 Col. 35:

- **Farmers' Association:** Village farmers who came together and started an association for the puporses of purchasing inputs/selling/storage of crops aiming at fetching better prices.
- **Cooperative Union:** A large inter-village/community set up in the district/ region or at national level for providing inputs, markets and storage of farmers' crops.
- **Government Regulatory laws for crops marketing:** Government instituted laws for regulatinq transportation and selling of crops.

Inputs (Q 5.3.1)

- Farm Yard Manure:** An organics fertliser made on farm from animal dung. .
- Compost:** An organic fertiliser made on farm from decomposed plant materials.
- Insecticides:** This is the chemical usde in protecting plants or killing pests.
- Fungicides:** Protects plants from fungi attack.
- Herbicide:** Chemicals used to control or kills weeds.
- Improved seeds:** Scientifically attested to be suitable for agricultural use.

Questions specific definitions

Q 5.3.1. Instructions on crops storage:

1. For the listed crops establish whether or not the household stored crops for 2007/2008 agricultural season.
2. For the listed crops give explanations on storage.

Q 5.3.1 Col 35

1. For each of crops listed indicate major marketing problems for 2007/2008 agricultural season.

Working area/calculation space

Definitions and working page for page 10

Investment in agriculture

Investment activities:

Investment activities refer to medium to long term farm development structures and projects. This can be irrigation structures, erosion control and water harvesting structures or other permanent or semi-permanent investment made on the land that the household owns.

Irrigated farming: Section 6.5:

Source of irrigation water (Col 1): The main source of the water used for irrigation.

Method of obtaining water (Col 2): The mechanism by which the water is extracted from the source

Irrigatable area (Col 3): The area the irrigation system is designed to cover in acreage

Area of irrigated land during the 2007/08 (Col 5): Area of land under irrigation during the 2007/08 agricultural year. This is the actual area and NOT the cumulative areas recultivated in 2 or more cropping seasons.

Farm Implements (Col. 1):

Machette : Include all implements use in tree cutting namely cicle, etc.

Sprinkler: The pump carried on the back or a hand used water pump

Hand used small tractor: A small tractor used in cultivation while the user walks on foot (see photo).



Section 6.2 Use of draft animals

Animals used in agricultural activities by the household during 2007/08 agricultural season.

Castrated Bulls: Castrated oxen meant for use in agricultural production.
Uncastrated Bulls: mature bulls used for garicultural activities but are not castrated.

Cow: Farmers also use mature female cattle in agricultural activities due to shortage of bulls

Donkey: Mature Male or female donkeys are also used for agricultural production.

Q 6.5 Irrigation.

1. If a household uses irrigated farming give explanations aon source and method of obatining water. .

2. See Col 10, Q. 5.1.1 and 5.2.1 and Col 12, Q 5.3.1 to see if irrigation was applied to any crop.

Farm implements, Q 6.1:

1. Collumn 2 Indicate whether or not inputs were used

2. Complete collumn 3 by entering the number of inputs used.

Farm inputs: Sections 6.3 and 6.4

1. Column 2 Indicate whether or not inputs were used.

2. Compelte collumn 3 by indicating where the inouts were obatined and collumn 4 by indicating the distance from where the inputs were obatined

Compost: An organic fertiliser made on farm from decomposed plant materials.

Insecticides: This is the chemical usde in protecting plants or killing pests.

Fungicides: Protects plants from fungi attack.
Herbicide: Chemicals used to control or kills weeds.

Improved seeds: Scientifically attested to be suitable for agricultural use.

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6.3 USE OF ORGANIC FERTILISERS																																											
6.3.1 Give details on the use of organic fertlisers during 2007/08 agriculture year																																											
	Type of fertiliser	Used	Yes=1, No=2	Quantity	Quantity used	Area used (Acre)																																					
	(1)		(2)	(3)	(4)	(5)																																					
6.3.2	Manure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																				
6.3.3	Compost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>																																				

ACCES TO INPUTS			
Give details on inputs used during 2007/08 agricultural year			
Name of inputs	Used (Yes=1, No=2)	Source	Distance
(1)	(2)	(3)	(4)
Inorganic fertilisers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Farm yard manure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Insecticides/Fungicide	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pest and weeds control chemicals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved seeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<p>Source (Col.3)</p> <p>Government.....01 Cooperative Union.....02 Farm inputs store/market.....03 Auction.....04 Development project.....05 Corp buyers.....06 Large Scake farms.....07 Made by the household.....08 Form neighbour.....09 Cooperative Union.....10 Others98 Not applicable.....99</p>	<p>Quantity (Col 3)</p> <p>Kg.....1 Ton.....2</p>
<p>Distance from the source (Cola 4)</p> <p>Under 1 kilometre.....1 Between One and three kilometres2 Between three and 10 kilometres3 Between 10 and 20 Kilometres4 Over 20 Kilometres.....5 Not applicable.....9</p>	

<p>IRRIGATED FARMING</p> <p>Did the household use irrigated farming during 2007/08 agriculture year? Yes=1, No = 2 <input type="checkbox"/></p> <p>If the answer is yes proceed to Section 6.6</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th style="width:5%;">Na.</th> <th style="width:25%;">Main source of water for irrigation</th> <th style="width:15%;">Main source of obtaining water</th> <th style="width:15%;">Area that can be irrigated (Hacre)</th> <th style="width:15%;">Area irrigated during 2007/08 agriculture year (Hacre)</th> </tr> <tr> <td></td> <td>(1)</td> <td>(2)</td> <td>(3)</td> <td>(4)</td> </tr> <tr> <td>6.5.2</td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> </tr> </table>	Na.	Main source of water for irrigation	Main source of obtaining water	Area that can be irrigated (Hacre)	Area irrigated during 2007/08 agriculture year (Hacre)		(1)	(2)	(3)	(4)	6.5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>Source of irrigation water (Col 1)</p> <p>River.....1 Wells4 Lake2 Deep wells.....5 Dams.....3 Cannals6 Tape water7</p> <p>Means of obtaining water(C0I2)</p> <p>Flwoing. (gravity).....1 Using a bucket.....2 Water pump (using hand or leg).....3 Electric /fuel driven pump/ mafuta.....4 Other (Specify).....8</p>
Na.	Main source of water for irrigation	Main source of obtaining water	Area that can be irrigated (Hacre)	Area irrigated during 2007/08 agriculture year (Hacre)												
	(1)	(2)	(3)	(4)												
6.5.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												

Definitions and working page for page 11

Q 6.6

The type of erosion control/Water harvesting (Col 1)

Terraces: Structures constructed on mountain slopes to provide flat terrain for crop planting.

Erosion control bunds: these are bunks of earth/stones built perpendicular to the slope to slow down the speed of water and thus preventing soil erosion. Its differs from terraces in that the soils on these banks are not at ground level .

Gabions: A box like structure made of wire and filled with large stones to prevent gully erosion.

Sand bags: Are used in controlling and preventing gully erosion
Tree belt/wind breaks: Trees planted against the wind direction for breaking wind speed..

Section 7.0 Acces to credit for crop or livestock production

Credit refers to something provided in cash or in kind (such as farm inputs, machines, livestock and other things) for crop or livestock production. The value of the credit must be repaid back to the lender. An Interest may or may not be attached to the value of the credit

The credit may be repaid either in cash or through farm produce to be harvested .

In this question the enumerator is at liberty to inquire up to three sources of credit where the farmer accessed credit from more than one source.

Section 8.0 Agricultural Extension Services

Agricultural Extension Services: Refers to educational services provided to farmers by extension officers for the purposes of increasing crop and livestock production.

Share-cropping: Refers to farming where smallholder / Smallscale farmer enters into an agreement with large scale farmer where the former sells produce to the latter in exchange of provisions of farm inputs and the like. .

Contract farming Farming: Farming agreement entered between smallscale and large scale farmers with regards to markets of farm produce and provision of farm inputs

Q 6.6 Number of water harvesting structures and year of construction

1. The number water harvesting structures refers to the number of working / maintained structures and does not include derelict or irreparable structures.

2. Year of construction refers to the year in which the structures were built, and not the year the structures were last repaired. The year should be written in figures e.g. 1998, 2006.

Section 7.0 Source of agriculture credit

If the farmer obtained credit from more than one source the use the code from the list provided. Start with the main source of credit in Section "7.1.1".a

Section 8.0 Agricultural extension services

1. Ask if the household did receive agricultural extension services during 2007/08 agricultural season from the respondents listed in column 1, then enter column 2.

2. Complete all columns for every extension officer.

6.6 SOIL EROSION												Identification <input type="text"/>											
6.6.1 Did the household experience soil erosion during 2007/08 agriculture year?												<input type="checkbox"/>											
(Yes=1, No=2)																							
6.6.2 Did the household applied any methods for erosion contro/water harvesting during 2007/08 agricultural year?												<input type="checkbox"/>											
(Yes=1, No =2) (If the answer is No, Proceed to Section 7.0)																							
Na.	Mechanisms of controlling erosion/ Water harvesting			Year of construction		Type of erosion control/water harvesting			Number of water harvesting	Year of construction													
	(1)					(1)						(2)	(3)										
6.6.3	Terraces					6.6.7	Tree belt																
6.6.4	Banks for erosion control					6.6.8	Soil banks of water harvesting																
6.6.5	Gabions/sand bags					6.6.9	Trenches																
6.6.6	Vetiva leaves					6.6.10	Other																
7.0 ACCESS TO ON FARM CREDITS																							
7.1 Is there any household member who accessed on farm credit during 2007/08 agriculture year? Yes=1, No=2 (If answer is NO, Proceed to Section 7.2)												<input type="checkbox"/>											
SELECT UP TO THREE SOURCES AND PROCEED TO QUESTIONA 8.0																							
<i>(Source of credit Q 7.1.1, 7.1.2, 7.1.3)</i>																							
Relative.....1 Saccos.....4 NGO/Development projects.....7												Source of credit											
Bank.....2 Businessman/Shop.....5												7.1.1a											
Cooperative Union.....3 Private individuals.....6 Other.....9												7.1.2a											
												7.1.3a											
												Credit provided to											
												7.1.1b											
												7.1.2b											
												7.1.3b											
												(Male=1, Female=2)											
7.2 IF THE ANSWER TO QUESTION 7.1 IS NO												<input type="checkbox"/>											
Give reasons for not accessing credit																							
<i>Reasons for not accessing credit (Q 7.2/3/4)</i>																							
Not required1 Did not to be indebted.....3 Did nott know how to access credit.....5 Credit delayed.....7 Did not credit existed.....9																							
Not available2 High interest rates.....4 Bureaucracy.....6 Other (Specify).....8																							
8.0 ADVISORY SERVICES IN AGRICULTURE																							
8.1 Did the household participate in outgrowers scheme during 2007/08 agriculture year? (Yes=1, No=2)												<input type="checkbox"/>											
8.2 Did the household participate in the contract farming during 2007/08 agriculture year? (Yes=1, No=2)												<input type="checkbox"/>											
8.3 Did your household receive agricultural advise on the following : (IF THE ANSWER IS NO IN COL 2 PROCEED TO THE FOLLOWING QUESTION																							
Na.	Advise on agriculture	(1)	Received advice (Yes=1, No=2)			Source of advise	(2)	(3)															
			(2)																				
8.3.1	Spacing																						
8.3.2	Use of agrochemicals																						
8.3.3	Soil erosion control																						
8.3.4	Use of organic manure																						
8.3.5	Matumizi ya mbolea za viwandani																						
8.3.6	Use of improved seeds																						
8.3.7	Use of modern farm implements																						
8.3.8	Irrigation																						
8.3.9	Crop Storage																						
8.3.10	Pest control																						
8.3.11	Other (Specify)																						
Source of agricultural advice (Cokl. 3)																							
Government.....1 NGO/Development project.....2 Cooperative.....3 Large Scale farmer....4 Radio/Newspapers....5 Neighbour6 Other source.....8																							

Definitions and working page for page 12

Q 9.1 and 9.3 : What is required is to establish whether or not the household kept or raised the listed livestock during 2007/08 agricultural season (i.e. from October 2007 to September 2008). Also to establish the number of livestock as of 1st October 2008

Keeping or raising livestock is to keep livestock at home while providing the livestock with animal feeds and medication and other services. The livestock could be owned by the farmer or kept on behalf of relatives or neighbours .

Sections 9.1.1 to 9.1.7 Cattle

Note:

Q 9.1 is for the actual number of cattle owned or kept by the household (as of 1st October 2008). This number does not include herds of cattle kept on behalf by relatives or neighbours; that is, the cattle outside the residential area of the household under survey.

1. If the the household keep mature fecund female cattle, it is expected that such a household will have calves which will be entered in question 9.1.6 or 9.1.7

Type of cattle (section 9.1.1 to 9.1.7)

Bull: Mature uncastrated male cattle used for breeding

Cow: Mature female cattle that has given birth at least once

Ox: Castrated male cattle used for farm work

Steer: Castrated male cattle used for meat

Heifer: Female cattle of 1 year up to the first calving

Section 9.3 Goat

Note:

Question 9.3 is for the actual number of owned or raised by the household (as of 1st October 2008) This number does not include goats kept on behalf by relatives or neighbours, that is the goat outside the residential area of the household under survey.

1. If the household has she goats, you would normally expect them to have kids

Type of Goat (Qs 9.3.1 to 9.3.5)

Billy Goat (he-goat): Mature Uncastrated male goat used for breeding

Castrated goat: Male goat that has been castrated

She Goat: Mature female goat over 9 months of age

9.0 LIVESTOCK (LIVESTOCK AND FISH)		Identification <input type="text"/>				
9.1 CATTLE		Did your household keep or raise cattle during 2007/08 agriculture year? Yes=1, No= 2 (If the answer is No proceed to Section 9.3) <input type="text"/>				
Number of cattle as of 1.10.2008						
No.	Type of cattle	Number of indigenous cattle	Number of improved cattle		Total	
		(2)	for meat (3)	Dairy (4)		(5)
9.1.1	Castrated bulls	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.1.2	uncastrated bulls	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.1.3	Cows	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.1.4	Steers	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.1.5	Heifer	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.1.6	Male calves	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.1.7	Female calves	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Grand total					<input type="text"/>	
9.1.8 What main methods do you use to identify your cattle? <input type="text"/>		<div style="border: 1px solid black; padding: 5px;"> Cattle identification methods Iron stamp (chapa moti).....1 Throat.....2 Ear/tail cutting.....3 Colour.....4 Earrings...5 Other8 </div>				
9.2 Milk production: CATTLE						
Na.	Season (1)	Type of cattle (2)	Number of milked cows (3)	Average of milk per cow per day (litre) (4)	Average number of days which your cows were milked (5)	Average price per litre per season (6)
9.2.1	Rainy	Improved	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.2.2		Indigenous	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.2.3	Dry	Improved	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.2.4		Indigenous	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.3 GOAT						
Did your household keep or raise cattle during 2007/08 agriculture year? Yes=1, No= 2 (If the answer is No proceed to Section 9.3) <input type="text"/>						
Number of goats as of 1.10.2008						
No.	Type of goat (1)	Number of indigenous goat	Number of improved		Total	
		(2)	for meat (3)	Dairy (4)		(5)
9.3.1	Male uncastrated goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.3.2	Male castrated goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.3.3	She goat	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.3.4	Male kid	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
9.3.5	She kid	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
Grand total					<input type="text"/>	
Milk Production: GOAT						
Na.	Season (1)	Number of milked goats (2)	Average of milk per goat per day (litre) (3)	Average number of days which your she goats were milked (4)	Average price per litre per season (5)	
9.3.6	Rainy	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
9.3.7	Dry	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Definitions and working page for page 13

Q 9.1 and 9.3 : What is required is to establish whether or not the household kept or raised the listed livestock during 2007/08 agricultural season (i.e. from October 2007 to September 2008). Also to establish the number of livestock as of 1st October 2008

Keeping or raising livestock is to to keep livestock at home while providing the livestock with animal feeds and medication and other services. The livestock could be owned by the farmer or kept on behalf of relatives or neighbours .

Sections 9.4 Sheep

Note:

Q 9.4 is for the actual number of sheep owned or kept by the household (as of 1st October 2008). This number does not include sheep kept on behalf by relatives or neighbours; that is, the sheep outside the residential area of the household under survey.

1. If the the household keep ewes, it is expected that such a household will have calves which will be entered in question 9.1.6 or 9.1.7

Type of Sheepe (Section 9.4.1 to 9.4.5)

Ram: Mature Uncastrated male sheept used for breeding

Castrated sheep: Male sheep that has been castrated

Ewe: Mature female sheep over 9 months of age

Lamb: Young sheep under 9 months of age.

Section 9.5 Pigs

Note:

Question 9.3 is for the actual number of pigs owned or raised by the household (as of 1st October 2008). This number does not include pigs kept on behalf by relatives or neighbours, that is the cattle outside the residential area of the household under survey. .

1. If the household has she goats, you would normally expect them to have kids in column

Type of Pigs (Qs 9.5.1 to 9.5.5)

Boar: Mature Uncastrated male pig used for breeing

Sow: Mature female pig that has given birth to at least one ltter of pigs .

Gilt: Female pig of over 3 months up to the first farrowing

Piglet: Young pig less than 3 months of age

Identification <input type="text"/>			
9.4 SHEEP		9.5 PIGS	
Did your household keep or raise cattle during 2007/08 agriculture year? Yes=1, No=2 (If the answer is No proceed to Section 9.5) <input type="checkbox"/>		Did your household keep or raise cattle during 2007/08 agriculture year? Yes=1, No=2 (If the answer is No proceed to Section 9.6) <input type="checkbox"/>	
Number of sheep as of 1.10.2008		Number of pigsp as of 1.10.2008	
Na.	Type of sheep	Number of indigenous sheep	Number of improved
	(1)	(2)	(3)
		Total	(5)
9.4.1	Ram	<input type="text"/>	<input type="text"/>
9.4.2	Castrated sheep	<input type="text"/>	<input type="text"/>
9.4.3	She sheep	<input type="text"/>	<input type="text"/>
9.4.4	Male lamb	<input type="text"/>	<input type="text"/>
9.4.5	Female lamb	<input type="text"/>	<input type="text"/>
Grand total			<input type="text"/>
Na.	Type Pigs	Number of pigs	
	(1)	(2)	
9.5.1	Boar	<input type="text"/>	
9.5.2	Castrated male	<input type="text"/>	
9.5.3	Sow/Gilt	<input type="text"/>	
9.5.4	Male piglet	<input type="text"/>	
9.5.5	Female piglet	<input type="text"/>	
Grand total			<input type="text"/>
9.6 OTHER LIVESTOCK			
	Type of animal	Number as of 1 October 2008	Number of eggs 2007/08 agriculture year
	(1)	(2)	(3)
9.6.1	Local chicken	<input type="text"/>	<input type="text"/>
9.6.2	Layers	<input type="text"/>	<input type="text"/>
9.6.3	Broilers	<input type="text"/>	
9.6.4	Ducks	<input type="text"/>	<input type="text"/>
9.6.5	Guinea pigs	<input type="text"/>	
	Type of animal	Number as of 1 October 2008	Number of Eggs 2007/08 agriculture year
	1	(2)	(3)
9.6.6	Turkeys	<input type="text"/>	<input type="text"/>
9.6.7	Rabbit	<input type="text"/>	
9.6.8	Donkeys	<input type="text"/>	
9.6.9	Horses	<input type="text"/>	
9.6.10	Dogs	<input type="text"/>	

Definitions and working page for page 14**Control of livestock diseases causing bugs**

Livestock worm control medicine: Medicine used to kill or control livestock on livestock . It is often used for cattle, goats, sheep and pigs.

Tiick: Is a dangerous bug that sucks blood form livestock and transmits animals diseases from one to the other animal.

Tse tse fly: A fly like bug that sucks blood from livetsock and transmits diseases sleewping sickness from one to the other animal.

Livestock advice (Section 9.8)

IA service provided by extension officers to livestock keepers for increasing livestock production.

9.7 LIVESTOCK DISEASES AND PEST CONTROL		Identificatio	
Did you livestock during 2007/08 agriculture year? (Yes=1, No=2) (If the answer is No proceed to Section 9.7.5)		<input type="checkbox"/>	
Which animals did your deworm? (Yes=1, No =2, Not applicable=3 in the relevant box)		<input type="checkbox"/>	
9.7.1 Cattle <input type="checkbox"/>	9.7.2 Goat/Sheep <input type="checkbox"/>	9.7.3 Pigs <input type="checkbox"/>	
9.7.4 Poultry <input type="checkbox"/>		<input type="checkbox"/>	
9.7.5 Do you experience tick problem with your livestock? (Yes =1, No = 2, Not applicable 3)		<input type="checkbox"/>	
9.7.6 How did you control tick problem? Control method (Q. 9.7.6): Dipping.....1 Spaying.....2 Application of medicine on back bone.....3 None..4 Other.....8		<input type="checkbox"/>	
9.7.7 Do you experience Tse tse problem with your livestock? (Yes =1, No = 2, Not applicable 3)		<input type="checkbox"/>	
9.7.8 How did you control Tse tse problem with your livestock? Control method (Q. 9.7.8): Dipping.....1 Spaying.....2 Traps.....3 None..4 Other.....8		<input type="checkbox"/>	
9.7.9 Do you experience Newcastle disease problem with your poultry? (Yes =1, No = 2, Not applicable 3)		<input type="checkbox"/>	
9.7.10 How do you control Newcastle disease problem with your poultry? Control/curative methods (Q. 9.7.10): Vaccination..1 Herbs....2 None..3		<input type="checkbox"/>	
9.7.11 Did you experience Fowl Typhoid with your poultry? Yes=1, No=2, Not applicable=3		<input type="checkbox"/>	
9.7.12 How did you control/cure Fowl Typhoid with your poultry? Control/curative methods (Swali 9.7.12): Vaccination..1 Herbs....2 Noe..3		<input type="checkbox"/>	
9.7.13 Were your cattle vaccinated against the following diseases? (Yes = 1, No = 2, Not applicable=3). 9.7.13 A: Foot and Mouth diseases <input type="checkbox"/> 9.7.13B: Skin disease <input type="checkbox"/>		<input type="checkbox"/>	
NOTE : If answers to Qs 9.1 to 9.6 is No (THAT IS THE HOUSEHOLD DOES NOT RAISE LIVESTOCK) Proceed to q.9.9			
9.8 Extension services on livestock			
Did you receive the following extension advice on the following? (IF THE ANSWER IS NO IN COL 2 PROCEED TO THE FOLLOWING QUESTION)			
Na.	Livestock extension advice (1)	Received Extension advice (Yes=1, No=2) (2)	Source of Extension (3)
9.8.1	Feed and better feeding methods	<input type="checkbox"/>	<input type="checkbox"/>
9.8.2	Improved livestock shed (Goat, Dairy cattle, Poultry and pigs)	<input type="checkbox"/>	<input type="checkbox"/>
9.8.3	Milking and hygiene	<input type="checkbox"/>	<input type="checkbox"/>
9.8.4	Cattle fattening	<input type="checkbox"/>	<input type="checkbox"/>
9.8.5	Livestock diseases control	<input type="checkbox"/>	<input type="checkbox"/>
9.8.6	Livestock keeping in line with land availability	<input type="checkbox"/>	<input type="checkbox"/>
9.8.7	Pasture establishment and maintenance	<input type="checkbox"/>	<input type="checkbox"/>
9.8.8	Forming and strengthening groups/cooperatives	<input type="checkbox"/>	<input type="checkbox"/>
9.8.9	Calf rearing	<input type="checkbox"/>	<input type="checkbox"/>
9.8.10	Basics of production and use of improved bulls (AI)	<input type="checkbox"/>	<input type="checkbox"/>
9.8.11	Animals feed production	<input type="checkbox"/>	<input type="checkbox"/>
9.8.12	Other extension advice (Specify)	<input type="checkbox"/>	<input type="checkbox"/>
Source of agriculture extension (Swima 3) SGovernment.....1 NGO/Development project.....2 Cooperative Union.....3 Large Scale farmer.....4 Radio/TV/Newspapers.....5 Neighbour.....6 Other source8			

Definitions and working page for page 15**General definitions**

Fish farming: Refers to the rearing/production of fish. It is different from fishing in that in fish farming the fish have to be reared. While in fishing, fishing nets or traps are used to catch fish from rivers, lakes and the sea; thus fishing should not be included in this section

1

Question Specific Definitions (Q 9.9)

Production unit number (Col 1): A production unit is a pond river/lake which is treated as a separate entity for the production of fish eg it may be by virtue of manageable size, maturity of fish, tye of fish etc. eg. a farmer may have 3 fish ponds (each one is a separate production unit).

Frequency of stocking (Col . 5): What is the number of time the farmer puts new fingerlings into the pond each year.

Fingerlings: These are young immature fish used for stocking ponds.

Sols: (Col 10 & 11)

If no fish were sold enter "0" in column 10 and 11`

Fish sold (Col.12)

Kama hakuna samaki waliouzwa jaza "0" katika safuwima 12

Working space for page 15

9.9 FISH FARMING
Identification

Did your household practice fish farming? Yes=1, No=2 (If the answer is no proceed to section 9.10)

Give details on the fish farming during 2007/08 agriculture year

No.	Number of Ponds	Aina ya ufugaji	Square area of pond (m ²)	Source of fingerings	What is the frequency of stocking during the period?	Kiwango cha Huduma ya bwawa	Total number of stoked fish				Total number of fish harvested	Total weight of all fish		What is the main fish outlet?
							Tialpia	Mwatiko	Crabs	Lulu		waliouliwa (kg)	waliouzwa (kg)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
9.9.1	1													
9.9.2	2													
9.9.3	3													

Type of farming (SCol 2)

Natural pond.....1
Small earth pond.....2
Large pond.....3
Other.....8

Standard of services to the pond (Col 6)

High leve.....1
Intermediate level.....2
Low leve.....3
Don't know.....8

Source of fingerings(Col 4)

From the pond.....1 Neighbour.....4
Government.....2 Business man.....5
NGO/Development Project...3 Natural Pond.....6
Other.....8

mainly sold to? (Col 14)

Neighbour...1 Auction.....3 Large Scale farmers.....5
Open market...2 Fish processing industry..4 Private business people ...6
Did not sell.....7 Other.....8

9.10 HONEY PRODUCTION

Is there honey production/harvesting in your household? Yes=1, No=2 (If answer is no PROCEED to Section 9.11)

Give details on honery harvesting during 2007/08 agriculture year

Number	Type of honey	Harvesting done? (Yes=1, No=2)	Number of improved bee hives	Number of local bee hives	Amount sold per year (Litre)	Amount of honey sold (litre)	Price per litre	Main market
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
9.10.1	Small bees							
9.10.2	Large bees							

Honey outlet Co 8

Neighbour...1 Auction.....3
Large Scale farmers.....5
Open market...2 Fish processing industry..4
Private business people ...6
Did not sell.....7

9.11 AGRICULTURAL CHALLENGES

From the list of cahhalengs in farming on the right of the page, SELECT FIVE MAIN CHALLENGES WHICH constrain your development in agriculture

No	With first five priorities	Code
	(1)	(2)
9.11.1	Priority 1	
9.11.2	Priority 2	
9.11.3	Priority 3	

No	Important for	Code
	(1)	(2)
9.11.4	Priority 4	
9.11.5	Priority 5	

LIST OF CHALLENGES

01 Land availability
02 Land ownership
03 Poor farm implementso
04 Soil fertility
05 Availability of imrpoved seeds
06 Irrigation services
07 Availability of agrochemicals
08 Cists of farm inputs
09 Extension services
10 Availability of forest resources
11 Huntinf and collection problems
12 Water availability
13 Access to credits

14 Lack of off farm incomes
15 Harvesting problems
16 Kupukuchua
17 Crop storage
18 Crop processing
19 Market information
20 High transporation costs
21 Destructive animals
22 Crop thefty
23 Pests and diseases
24 Advice from Local government
25 Long dry spells
26 Conflicts between livetsock keepera and pastoralists

Ruvuma Region Agriculture Sample Census – 2007/08

Definitions and working page for page 16**10.0 Household poverty indicators****Number of rooms used for sleeping in the household (Q 10.1.4)**

Include sitting room, dining room, kitchen, etc if used for sleeping.

It also includes rooms outside the main dwelling

A room is defined as a space which is separate from the rest of the building by a permanent wall or division. A building / house that is not divided into rooms is considered to have one room.

Household assets (Q 10.2):

These assets must be functional. Do not include if broken.

Access to drinking water (Q 10.4):

If there is more than one source use the one, which the hh uses most frequently.

Main source of hh cash income:(Q 10.7:





Activity that provides the hh with the most cash during 2007/08 agricultural season.

10.0 POVERTY INDICATORS				Identification <input type="text"/>																																							
10.1 HOUSE CONSTRUCTION Specify materials used in the construction of the following sehemu zifuatazo 10.1.1 Roof <input type="checkbox"/> 10.1.2 Floor <input type="checkbox"/> 10.1.3 Wall <input type="checkbox"/> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;"> Roofing materials Iron sheets.....1 Tiles.....2 Concrete.....3 Asbestos.....4 Grass/Makuti.....5 Grass and mud...6 Other.....8 </div> <div style="border: 1px solid black; padding: 2px;"> Floor materials Earthen material.....1 Wood.....2 Wooden tiles...3 Tiles.....4 Cement.....5 Other.....8 </div> </div> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> Main materials Grass and pieces of woods.....1 Mud.....2 Wet bricks.....3 Burnt bricks...4 Wood.....5 Block bricks.....6 Stonese.....7 Bricks/Mawe ya kichanga.....8 </div>				10.2 Household property Does your household own the following?, (Yes=1 No =2) <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Number</th> <th style="width: 60%;">Property</th> <th style="width: 30%;">Yes=1, No=2</th> </tr> <tr> <th></th> <th>(1)</th> <th>(2)</th> </tr> </thead> <tbody> <tr><td>10.2.1</td><td>Radio (Radio, Radio Casette, music system)</td><td><input type="checkbox"/></td></tr> <tr><td>10.2.2</td><td>Land line</td><td><input type="checkbox"/></td></tr> <tr><td>10.2.3</td><td>Celkl phone</td><td><input type="checkbox"/></td></tr> <tr><td>10.2.4</td><td>Iron</td><td><input type="checkbox"/></td></tr> <tr><td>10.2.5</td><td>Trolley</td><td><input type="checkbox"/></td></tr> <tr><td>10.2.6</td><td>Bycicle</td><td><input type="checkbox"/></td></tr> <tr><td>10.2.7</td><td>Vehicle</td><td><input type="checkbox"/></td></tr> <tr><td>10.2.8</td><td>TV/ Video</td><td><input type="checkbox"/></td></tr> <tr><td>10.2.9</td><td>Refrigerator</td><td><input type="checkbox"/></td></tr> <tr><td>10.2.10</td><td>Motorbike/vespa</td><td><input type="checkbox"/></td></tr> </tbody> </table>				Number	Property	Yes=1, No=2		(1)	(2)	10.2.1	Radio (Radio, Radio Casette, music system)	<input type="checkbox"/>	10.2.2	Land line	<input type="checkbox"/>	10.2.3	Celkl phone	<input type="checkbox"/>	10.2.4	Iron	<input type="checkbox"/>	10.2.5	Trolley	<input type="checkbox"/>	10.2.6	Bycicle	<input type="checkbox"/>	10.2.7	Vehicle	<input type="checkbox"/>	10.2.8	TV/ Video	<input type="checkbox"/>	10.2.9	Refrigerator	<input type="checkbox"/>	10.2.10	Motorbike/vespa	<input type="checkbox"/>
Number	Property	Yes=1, No=2																																									
	(1)	(2)																																									
10.2.1	Radio (Radio, Radio Casette, music system)	<input type="checkbox"/>																																									
10.2.2	Land line	<input type="checkbox"/>																																									
10.2.3	Celkl phone	<input type="checkbox"/>																																									
10.2.4	Iron	<input type="checkbox"/>																																									
10.2.5	Trolley	<input type="checkbox"/>																																									
10.2.6	Bycicle	<input type="checkbox"/>																																									
10.2.7	Vehicle	<input type="checkbox"/>																																									
10.2.8	TV/ Video	<input type="checkbox"/>																																									
10.2.9	Refrigerator	<input type="checkbox"/>																																									
10.2.10	Motorbike/vespa	<input type="checkbox"/>																																									
10.1.4 Number of bedrooms <input type="text"/>				10.3 Energy use and availability in the household				10.4 Availability of drinking water <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;">Season</th> <th style="width: 15%;">Main source of water</th> <th style="width: 20%;">Distance from source (km)</th> <th style="width: 45%;">Time spent waiting or going to and from the source (Hours)</th> </tr> <tr> <th>(1)</th> <th>(2)</th> <th>(3)</th> <th>(4)</th> </tr> </thead> <tbody> <tr> <td>10.4.1 Rainy</td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>10.4.2 Dry period</td> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;"> Main source of drinking water Col. 2 Tape water.....01 Water venders.....09 Artificial well.....02 Boozer.....10 Artificial spring.....03 Bottled water.....11 Openwell.....04 Other (Specify).....98 Natural spring.....05 Lake water, pond, river, stream n etc.....06 Covered Rain water harvesting well...07 </div>				Season	Main source of water	Distance from source (km)	Time spent waiting or going to and from the source (Hours)	(1)	(2)	(3)	(4)	10.4.1 Rainy	<input type="text"/>	<input type="text"/>	<input type="text"/>	10.4.2 Dry period	<input type="text"/>	<input type="text"/>	<input type="text"/>																
Season	Main source of water	Distance from source (km)	Time spent waiting or going to and from the source (Hours)																																								
(1)	(2)	(3)	(4)																																								
10.4.1 Rainy	<input type="text"/>	<input type="text"/>	<input type="text"/>																																								
10.4.2 Dry period	<input type="text"/>	<input type="text"/>	<input type="text"/>																																								
10.3.1 Lightning <input type="checkbox"/> 10.3.2 Cooking <input type="checkbox"/> <div style="display: flex; justify-content: space-between;"> <div style="border: 1px solid black; padding: 2px;"> Nishati za Kuanqazia Umeme.....01 Sola.....02 Gesi (biogas).....03 Taa ya kandili.....04 Karabai.....05 Kibatari.....06 Mishumaa.....07 kuni.....08 Nyingine.....98 </div> <div style="border: 1px solid black; padding: 2px;"> Nishati za kupikia Umeme.....01 Sola.....02 Gesi (biogas).....03 Gesi (Kiwandani).....04 Mafuta ya taa.....05 Mkaa.....06 Kuni.....07 Mabaki ya Mazao.....08 Kinyesi cha.....09 Wanyama.....09 Nyingine.....98 </div> </div>				Note: Code 01, Bomba kwa Zanzibar hujulikana kama Mfereji																																							
10.5 Toilet facilities 10.5.1 What type of toilet does your household use? <input type="checkbox"/> <div style="border: 1px solid black; padding: 2px;"> Type of toilet No toilet/in the bush.....1 Pit latrine.....4 Flush toilet.....2 Other type (Specify).....8 Ordinal pit latrine.....3 </div>				10.6 Eating patterns 10.6.1 How many meals does your household usually get per day? <input type="checkbox"/> 10.6.2 How days did the household eat meat last week? <input type="checkbox"/> 10.6.3 How days did the household eat fish last week? <input type="checkbox"/> 10.6.4 How many times did the household experience food shortages last year? <input type="checkbox"/>																																							
10.7 Main source of household cash income? 10.7.1 What are the sources of household income? <input type="text"/> <div style="border: 1px solid black; padding: 2px;"> Code for source of income Selling food crops.....01 Sales of foerst products...05 Cash assisnace...09 Sales of livestock.....02 Business.....06 Fishing!.....10 Sales of livestock products.....03 Salaries.....07 Other.....98 Sales of cash crops...04 Casual labour.....08 None.....99 </div>				<div style="border: 1px solid black; padding: 2px;"> Food shortage problems (Swali 10.6.4) Never.....1 Few times.....2 Sometimes.....3 Many times.....4 Often.....5 </div>																																							
TIME OF FINISHING THE INTERVIEW				Hour	Minutes	<input type="text"/>	<input type="text"/>																																				

4.2.5.1.1.1.1.1 Appendix V

4.2.5.1.1.1.1.2

4.2.5.1.1.1.1.3 Community Level Questionnaire

ACQ 3	United Republic of Tanzania 	CONFIDENTIAL																														
	Village/Community Level Formats Access to and Use of Community Resources Farm Gate Prices of commodities produced by the village																															
 Agricultural Sample Census 2007/2008		NUMBER OF FARMERS HH IN THE VILLAGE To be filled by the enumerator after completing form ACLF2 <table border="1" style="width: 100%; height: 20px;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																														
Region		<table border="1" style="width: 100%; height: 20px;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																														
District		<table border="1" style="width: 100%; height: 20px;"> <tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>																														
Enumerator Name		Signature																														
Date of Enumeration <table style="width: 100%;"> <tr> <td style="text-align: center;"> <table border="1" style="width: 30px; height: 30px; display: inline-table;"> <tr><td> </td><td> </td></tr> </table> d d </td> <td style="text-align: center;"> <table border="1" style="width: 30px; height: 30px; display: inline-table;"> <tr><td> </td><td> </td></tr> </table> m m </td> <td style="text-align: center;"> <table border="1" style="width: 60px; height: 30px; display: inline-table;"> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table> y y y y </td> <td style="text-align: center;"> Start Time </td> </tr> <tr> <td colspan="3"></td> <td style="text-align: center;"> End Time </td> </tr> </table>		<table border="1" style="width: 30px; height: 30px; display: inline-table;"> <tr><td> </td><td> </td></tr> </table> d d			<table border="1" style="width: 30px; height: 30px; display: inline-table;"> <tr><td> </td><td> </td></tr> </table> m m			<table border="1" style="width: 60px; height: 30px; display: inline-table;"> <tr><td> </td><td> </td><td> </td><td> </td></tr> </table> y y y y					Start Time				End Time	<table border="1" style="width: 100%;"> <tr> <th style="width: 50%;">Hour</th> <th style="width: 50%;">Minutes</th> </tr> <tr> <td style="text-align: center;"> <table border="1" style="width: 30px; height: 30px;"> <tr><td> </td><td> </td></tr> </table> </td> <td style="text-align: center;"> <table border="1" style="width: 30px; height: 30px;"> <tr><td> </td><td> </td></tr> </table> </td> </tr> <tr> <td style="text-align: center;"> <table border="1" style="width: 30px; height: 30px;"> <tr><td> </td><td> </td></tr> </table> </td> <td style="text-align: center;"> <table border="1" style="width: 30px; height: 30px;"> <tr><td> </td><td> </td></tr> </table> </td> </tr> </table>	Hour	Minutes	<table border="1" style="width: 30px; height: 30px;"> <tr><td> </td><td> </td></tr> </table>			<table border="1" style="width: 30px; height: 30px;"> <tr><td> </td><td> </td></tr> </table>			<table border="1" style="width: 30px; height: 30px;"> <tr><td> </td><td> </td></tr> </table>			<table border="1" style="width: 30px; height: 30px;"> <tr><td> </td><td> </td></tr> </table>		
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Field level checking by: District Supervisor Name Signature Date / / Regional Supervisor Name Signature Date / / National Supervisor Name Signature Date / /		I To be filled by the supervisor ONLY after Field/farm level checking of the enumeration process. This should be countersigned by the Supervisor in front of the enumerator																														
District checking in Office District Supervisor Name Signature Date / /		All questionnaires must be checked at the district office.																														
For Use at Regional Level Only Data entered by: Name Signature Date / / Queried Name Signature Date / /		See the back page for details of queries																														
Ministry of Agriculture and Food Security, Ministry of Livestock and Fisheries Development, Ministry of Agriculture and Environment of Zanzibar, Ministry of Water and Irrigation, Prime Ministers' Office Regional Administration and Local Government, Ministry of Industry Trade and Marketing, National Bureau of Statistics, and the Office of the Government Statistician General of Revolution Government of Zanzibar																																

Definitions and working page for page 3

Question Specific Definitions:

Obtain answers to the following questions from the meeting between the enumerator and influential farmers in the village
 Influential people can be Village Chairman, Village Government Executive Officer, Councillor, Ward Chairman, Extension Officer in the village or any other person in the village and who is well informed about village matters. It is important to not that these questions must be asked in groups (of more than one people) to obtain answers discussed and approved by many people.

Definitions of some specific terms

Access to community resources. Section 1.0

Community Resources: Resources in which the hh members have no individual claim to and which are shared together by all the village
Community Land: The area official demarcated by the village as shared/public land.
Squatting farmers Land: Communal land where individual hhs make sole claim to (for crop farming or fenced livestock) without official rights to ownership.
Available remaining Land: Official area of communal land minus areas of squatting farmers.
Government Land Reserve: Area set aside by the government as national reserve

Community tree planting scheme(Section 14.3)

Community Forests: A forest planted on the communal land which is planted, replanted or spt planted by the members of the village.
Plant Planting: An area designated by the village for planting a block of trees.
Spot Planted: Replanting an area where selective logging has been carried out. A tree is planted to replace the one that has been cut.
Indigeous Trees: Trees that are native to Tanzania
Exotic Trees: Trees that are not native to Tanzania

Non Government Organisation: Is managed by people from outside the village and it normally covers more than one village/District/R region. Its function is to provide deveoopment assistance to the farmer and is free from direct government links.

Village level organization: is managed by members of the village. Its purpose is normally to access/provide development assistance to the village

Obtain answers to the following questions from the meeting of enumerator and key informants in the village. Key informants can be a village chairman, Village Local Government Executive Officer, Councillor, Ward Chairman, Village extension officer, or any knowledgeable member in the community. Where possible ask these questions to a group in order to reach a consensus. **The number should be below five people.**

Procedure: Administer this form after completing all smallholder questionnaires for the village.
 1. Copy the name of all crops from Sections 5.1, 5.2 and 5.3 grown in the village from smallholder questionnaires. This should also include livestock raised by the household from questions 9.1, 9.3, 9.4 and 9.5 and enter them in column 1 of this form. Also see codes for livestock below.
 2. Enter price estimates per kg in column 5 and 6.

Name of crop/livestock (1)	Code of crop/livestock (2)	Name of main crop (3)	Code of Main crop (4)	Type of measure (5)	Price of measure	
					Minimum Per year (6)	Maximum Per year (7)

Type of livestock (Col. 2)
 Cattle01 Ducks.....07
 Goat.....02 Turkey.....08
 Sheep.....03 Rabbit.....09
 Pigs.....04 Kanga.....10
 Poultry.....05 Simbilsa.....11
 Donkeys.....06

Main product- CROPS (Col.4)
 Cereals.....01 Flowers eg. Pyrethrum.....07
 Green maize.....02 Vegetables.....08
 Green leaves and stem.....03 Fruit.....09
 Straw, dry stems etc.....04 Other.....10
 Roots and tubers, etc.....05
 Leaves (Tobacco etc).....06

Main product- LIVESTOCK (Col. 4)
 Live animals.....01
 Meat02
 Milk.....03
 Eggs.....04

Quantity (Col.5)
 Kg.....1
 Number.....2
 Litre3
 A portion/piece 1.4

4.2.5.1.1.1.1.4 Appendix V


4.2.5.1.1.1.1.5


4.2.5.1.1.1.1.6 Village Community Level formats

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ACLF 1





Page Number..... out of.....

Agriculture Sample Census 2007/08



Sub-village /ward leader listing from


Region _____ Code Ward _____ Code
 District _____ Code Village _____ Code


Sub village leader Number	Name of Ward village leader	Number of Households		Comments
		Form Office Register	After enumeration	
(1)	(2)	(3)	(4)	(5)
<input type="text"/>		<input type="text"/>	<input type="text"/>	
<input type="text"/>		<input type="text"/>	<input type="text"/>	
<input type="text"/>		<input type="text"/>	<input type="text"/>	
<input type="text"/>		<input type="text"/>	<input type="text"/>	

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ACLF 2





Page Number..... out of.....

Agriculture Sample Census 2007/08




Household listing from-for listing hh heads and agriculture activities

Region _____ Code Name of sub village leader _____
 District _____ Code Name of sub village _____
 Ward _____ Code
 Village _____ Code


Household number	Household head name	Fields a	Number of								If the Respondent Qualifies X	Farmer Serial Number		
			Cattle				Goats	Sheep	Pigs	Kuku/Bata/ Rabbit				
			Total	Bulls	Cows	Calves								
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
<input type="text"/>														
<input type="text"/>														
<input type="text"/>														
<input type="text"/>														

ACLF 3

Household listing for 15 selected farmers




UNITED REPUBLIC OF TANZANIA



National Agriculture Sample Census 2007/08

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Region _____ Code ward : _____ code Namba Sawia

District _____ Code village _____ code Hatua

S/N	Sub-village leader Number	Name of sub-village leader	Name of selected head of household	Name of Household Head	Number of					
					Field	Cattle	Goat	Sheep	Pigs	Poultry
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)